# SECTION 5.0

## ENVIRONMENTAL CONSEQUENCES

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## 5.1 INTRODUCTION

This section addresses the consequences of implementing the Proposed Action (GMA approval) or the No Action Alternative.

The SEIS uses the No Action Alternative as the baseline for determining impacts of the federal action under NEPA. NEPA requires the evaluation of the potential effects of alternatives in comparison with the likely No Action condition from the time the Proposed Action is implemented and/or becomes operational. The No Action Alternative baseline assumes the completion and operation of the JIV Gaming Facility, including the use of Daisy Drive with the completion of improvements identified by Caltrans as part of the SR-94 Improvements Project. Please refer to **Section 3.4** for additional information on the No Action Alternative.

While both JIV and Caltrans have identified Daisy Drive as the preferred access alternative, evaluation of the No Action Alternative includes consideration of the two other alternative accesses in the unlikely event that one of those options are ultimately selected. The two other alternative access options consist of 1) improving Reservation Road, and 2) constructing a new access road from Melody Road. These are described in **Section 3.4.2**.

Because the No Action Alternative is used as the baseline for determining impacts of the Proposed Action, the No Action Alternative is addressed first in **Section 5.2**, followed by an analysis of the Proposed Action in **Section 5.3**.

Information provided below is intended to supplement information contained in the 2003 Final EIS where needed. The environmental resource areas addressed, and their respective section in the 2003 document, are listed below:

1. Land Resources (Section 4.2),
2. Water Resources (Section 4.3),
3. Air Quality (Section 4.4),
4. Biological Resources (Section 4.5),
5. Cultural and Paleontological Resources (Section 4.6),
6. Socioeconomic (Section 4.7) and Environmental Justice Conditions (Section 4.11),
7. Resources Use Patterns (Section 4.8),

8. Public Services (Section 4.9),
9. Other Values (Section 4.10),
10. Growth-Inducing Effects (Section 4.12), and
11. Cumulative Effects (Section 4.13).

## 5.2 ENVIRONMENTAL CONSEQUENCES OF THE NO ACTION ALTERNATIVE/BASELINE CONDITIONS

No GMA between the JIV and SDGV would exist under the No Action Alternative, resulting in the operation and management of the Gaming Facility by JIV, which would not require NIGC approval. JIV operation/management of the JIV Gaming Facility would not result in activities that would significantly impact the environment. JIV, instead of SDGV, would determine use of vendors; rates; pricing; charges to guests or patrons; concessioners, the issuance of credit; the granting of complementaries; the terms of admittance to the Gaming Facility for purposes of entertainment; staffing levels; organizational structure; and the type and character of publicity, marketing, advertising, entertainment and promotion.

The difference between the Proposed Action (GMA approval) and the No Action Alternative is expected to be net operating profits realized. There is no way to know if there would be a net increase/decrease in operating profits in the long run; however, it is reasonable to assume that initial net operating profits would be less under the No Action Alternative than under the Proposed Action given that a "learning curve" would be experienced by the JIV at the outset. However, future profits would be dictated by the managerial style employed by the JIV. Regardless of the managerial style to be used by the JIV, this is not expected to significantly affect the operation of the facility. This, in turn, would not impact the environment.

It is assumed for purposes of this baseline analysis that the Gaming Facility would be used as planned and described in the Final TEE and in **Section 3.4** of the SEIS. Please see the discussion below for environmental consequences associated with the operation of the JIV Gaming Facility.

The analysis presented below is based upon analysis provided in the following documents:

- Jamul Indian Village Final Environmental Impact Statement (August 2003);
- Final Tribal Environmental Evaluation for the Reservation Gaming Development Project (January 2013);
- Addendum: Tribal Environmental Evaluation (February 2014);
- Addendum: Long Soil Nails (June 2014);

- Addendum: Temporary Construction Staging (October 2014);
- Wastewater Addendum (May 2015); and
- State Route-94 Improvement Project Draft Environmental Impact Report (July 2015).

The methodology and standards used in preparing the Final TEE and addendums are those used in preparing NEPA documents. The Final TEE and addendums can be reviewed at the JIV Website: http://www.jamulindianvillage.com/relevant-documents/.

## 5.2.1 LAND RESOURCES

### 5.2.1.1 Topography

The Gaming Facility project area does not contain any rare, high quality, or scientifically significant geologic or topographic resources, and does not encompass any areas designated as National Natural Landmarks. The JIV Gaming Facility is built into the sloping hills on the eastern side of the Reservation, with the lower levels of the parking garage being excavated into the hillside. Willow Creek, which bisects the Reservation, has been avoided. A wastewater treatment plant is being built on the western side of the Reservation. This area has been leveled with retaining walls placed along the south boundary of the Reservation and along the Willow Creek arroyo.

Minor earthwork was needed for the temporary staging on the 4-acre parcel. This parcel would be brought back to existing conditions with implementation of a Habitat Restoration Plan. If the JIV proceeds with construction of the fire station on the adjacent 4-acre parcel, minor grading would be needed to remove the old fire station foundation on the 4-acre parcel.

Upon completion, Daisy Drive would be a divided roadway with an entrance ramp elevated over an exit ramp. The ramps would raise the roadway from the grade of SR-94 to the separate entrance and exit levels of the Gaming Facility. Based on engineering plans, up to 15 feet of fill would be added to accomplish the elevation change, with retaining walls to contain the fill. The retaining walls would have a height of 10 to 17 feet. From the top of the fill ramp, the final portion of the entrance ramp would be an elevated bridge over the exit ramp. Other grading would include the construction of a bioretention basin near the intersection with SR-94 to manage stormwater from the ramps.

The Daisy Drive access ramps would be constructed along a southward-rising hillside located directly to the east of the roadway, thereby reducing the apparent grade alteration from SR-94, and providing visual integration with the surrounding landscape. The most substantial retaining wall would be along the western edge of Daisy Drive and

views of this feature by southbound travelers on SR-94 would be obscured by existing trees and planned landscaping. No significant topographical features would be altered, and the slope of the adjacent hillside would be preserved.

If the access option of Daisy Drive is not selected, one of the two alternative access routes would be used. Reservation Road is cut into an existing hillside with retaining walls supporting the cut banks. The new access from Melody Road would require cutting and filling slopes and the use of retaining walls along the entire length of the road. While some cut slopes would be noticeable after construction is complete, the major topographical features of the project site, such as hilltops, drainages, and steep slopes would be preserved.

#### 5.2.1.2 Soils/Geology

The Gaming Facility area does not contain any rare, high quality, or scientifically significant geologic resources, and does not encompass any areas designated as National Natural Landmarks. Excavation and blasting was completed on the Reservation during the 2014 construction period. Following excavation, the use of subsurface bedrock nails ("soil nails") were used to support and strengthen the parking structure walls on the east side of the Reservation. The rebar-like nature of the soil nail process assists in ensuring that the underlying area is stabilized and not subject to ground failure. According to CTE, Cal, Inc. in their October 16, 2013 report[1], upper residual soils are confined to the upper 4-17 feet of the site, while fills, where encountered, ranged in thickness from 2-15.5 feet thick. Weathered granite extended to depths of 17-65 feet below ground surface. Competent granite exists below these depths.[2] The installation of soil nails was completed during the 2014 construction period.

A portion of the west side of the Reservation would be used for limited subsurface wastewater disposal. This area is underlain with documented fill over granitic rock. The documented fill generally consists of silty sand with clay and fine gravel. The granitic rock has varying degrees of weathering, rock strength, and rock hardness according to a rock characterization study completed for the entire reservation (Wastewater Addendum, May 2015). The granite rock ranges from extremely weathered and very weak to slightly weathered strong granitic rock.

[1] / Report of Additional Geotechnical Core Explorations: Jamul Gaming Facility Development Project (October 16, 2013)
[2] / According to CTE, Cal, Inc. in *Report of Additional Geotechnical Core Explorations: Jamul Gaming Facility Development Project* (October 16, 2013), the "Core recovery in the upper cored materials was low as intermittent weathered granite continued to be present."

The granitic rock encountered within the WWTP explorations during grading operations west of Willow Creek was mapped as being extremely to highly weathered granitic rock that is very weak to weak, with low hardness, locally friable, and locally grades upward into residual (saprolite) soil. The granitic rock was observed to depths of approximately 20 feet. A general observation from the rock characterization study was that extensive weathering and clay infilled fractures and only a few fractures with clay were observed in the underlying granite.

Based upon field observations, limited fracture flow is anticipated within the granite due to the extreme weathering and clay infilling of the closely spaced tight to healed fractures. The rock is so weathered and locally friable that rock properties are more like a soil than a hard rock. Observations of the bridge abutment foundations along Willow Creek indicated that groundwater flow is primarily along alluvial/residual soil to granitic rock contact. As the alluvial soils is replaced by documented fill, flow is anticipated to travel along the documented fill-granitic rock contact. This is further indicated by the slightly faster percolation rates within the fill as compared to the weathered granitic rock, which indicates that as water infiltrates through the documented fill and encounters the less permeable weathered granitic rock a preferred pathway is downslope toward Willow Creek along this contact.

Excess treated water would need to be disposed during the months of November through May. The monthly treated water surplus estimates show that a maximum of 37,419 gpd during the month of January is the worst-case month for excess water during the year (Wastewater Addendum, May 2015). No excess water would need to be disposed of during the months June through October. Some of this water would be disposed on-site in subsurface percolation chambers. Percolation tests conducted for the on-site percolation areas were conducted in general accordance with the County of San Diego guidelines and are presented in the Wastewater Addendum. The percolation rates account for both lateral and vertical flow through the tested section. The percolation rates of 0.85 feet per day rate for the percolation chambers would ensure that the soils would be capable of adequately supporting the use of the treated water disposal system assuming 37,000 gpd maximum disposal (Wastewater Addendum, May 2015). However, to ensure 100 percent redundancy, a maximum of approximately 18,000 gpd would be disposed of at any one day during the winter months. Excess water beyond the 18,000 gpd disposed of on-site, which would occur during the months of November to February, would be trucked to San Diego Metro Pump Station No. 1 Receiving Station located on East Harbor Drive in the City of San Diego.

Although detailed studies of rock permeability, fracture flow, and storage capacity have not been performed, the infiltrating waters are not generally anticipated to generate

springs or raise extended groundwater levels above historic high levels (Wastewater Addendum, May 2015).

If the JIV develops a fire station on the adjacent 4-acre parcel, construction would occur in an area previously developed and site stability would be ensured by compliance with applicable building codes. Development of the temporary parking/staging area on the 87-acre parcel was developed using erosion control materials over the existing ground surface. All disturbed areas would be restored and re-vegetated, thereby reducing the potential for erosion.

Construction of Daisy Drive would occur in an area of relatively flat topography with stable granitic bedrock. No geologic hazards exist in the area. Of the two alternative access route locations, Reservation Road cuts across a hillside with the cut banks stabilized with retaining walls. No additional measures would be required to stabilize the area. Development of the new access from Melody Road would require cutting and filling slopes and the use of retaining walls along the entire length of the road to stabilize the roadway and surrounding banks.

All construction associated with the Gaming Facility, including the access roadway improvements and optional fire station, is required to comply with U.S. EPA's General Storm Water Discharge Permit for Construction Activities (NPDES No. CAR10000IF). Coverage under the permit requires creation and implementation of an effective Storm Water Pollution Prevention Plan (SWPPP), erosion control plan, hazardous materials management and spill response plan, and construction best management practices (BMPs), all of which are designed to minimize or eliminate erosion issues and eliminate sediment discharges. With proper implementation, these plans reduce or eliminate the potential for accidental release of sediment or pollutants during construction, as well as reduce the potential for erosion. The erosion control plan was prepared before construction commenced, and identified the location of erosion control features necessary to protect and filter stormwater runoff. The erosion control plan meets Sections 87.101 through 87.717 of the San Diego County Code of Regulatory Ordinances. Features used during construction include but are not limited to silt fences, fiber rolls, and gravel bag check dams. Permanent erosion control features such as drop inlet sediment traps, vegetated drainage swales, and energy dissipaters have also been incorporated into the site design.

#### 5.2.1.3 Seismicity

Although the Gaming Facility and associated facilities, including the access roadway improvements and optional fire station, are not near any active fault zones, these structures could be subject to seismic activity such as severe ground shaking and

acceleration forces from earthquakes in other regions. Design and construction of the facilities has and would adhere to the 2013 California Building Code and 2012 International Building Code, which address structural design requirements for buildings and other structures (including hazardous materials storage facilities) that are consistent with rational analyses and well-established principles of mechanics. These codes cover earthquake design, which has provisions to safe guard against major structural failures and loss of life.

#### 5.2.1.4 Mineral Resources

Development of the JIV Gaming Facility and associated facilities, including the access roadway improvements and optional fire station, would not adversely affect any known or recorded mineral resources, nor would it result in a loss of economically viable aggregate rock or diminish the extraction of important ores or minerals. Because there are no known or mapped mineral resources within the Gaming Facility project area, resources would not be affected by development and use of the Gaming Facility project site.

### 5.2.2 WATER RESOURCES

#### 5.2.2.1 Drainage/Flooding

The increased imperviousness caused by the construction of the JIV Gaming Facility structures would increase site runoff within the Gaming Facility project site. To address the potential off site drainage effect caused by increased runoff from impervious surfaces, the JIV Gaming Facility has engineered a storm water detention facility to detain site generated stormwater and discharge it at a rate that matches pre-project flow conditions based on the County's 6 hour 100 year model storm. Green roofs and permeable pavements have also been added to the Gaming Facility project to reduce impervious surfaces and to allow storm water to infiltrate into the ground or reduce the rate at which it leaves the site. Hydrologic studies performed by engineers have determined that the JIV Gaming Facility would not cause an increase in peak runoff volume or severity off-Reservation (**Appendix 6**).

Runoff from these impervious areas would be conveyed into an underground Stormtech™ detention facility (StormTech™ RC-750, or equivalent) with gravel backfill underneath the paved roads and cantilevered ramps to detain the increased runoff. These subterranean chambers would serve as detention facilities prior to entering the bioretention facility. These chambers would detain the increased runoff thereby mitigating both the increased runoff from the 100-year storm and for hydromodification detention. Detention facilities would release runoff at the appropriate rate to bioretention

treatment facilities. Outlet structures would be constructed to release storm water at a rate such that would not increase 100-year storm runoff into Willow Creek.

The bioretention facility is a planter area with 18-inches or more of engineered soil. Bioretention facilities work by percolating runoff through the soil which removes most pollutants before the runoff is allowed to seep into native soils below or a sub-drain that carries runoff to a detention device or storm water conveyance system. For additional detention, green roofs covering the Gaming Facility, would be installed. Green roofs are vegetated roof covers with growing media and plants taking the place of bare membrane, gravel ballast, shingles, roof tiles, etc. Green roofs are considered by the County of San Diego to be self-retaining and do not require additional storm water detention. In effect, they are treated like landscape areas at ground level and do not increase runoff. Since they are self-contained, runoff from green roofs can easily be kept separate from other ground level improvements and can be discharged without detention.

The parking lot on the west side of the Reservation would consist of Gravelpave2™ pavement, or equivalent, to provide pervious parking surfaces. Gravelpave2™ is a gravel filled pervious plastic sub-surface reinforcement structure, with geotextile fabric underneath. Gravelpave2™ is used in lieu of asphalt or concrete, which are impervious, and allows water to percolate through the road or parking surface, where it is collected and conveyed to the gravel detention facility.

This storm water system was designed to handle the additional runoff generated by the Gaming Facility project development so that downstream runoff during the peak period is not increased when compared with pre-project conditions. The detention facility allows for a controlled release of storm water at or below pre-development peak rates. Therefore, storm water discharge from the Gaming Facility site would not significantly affect downstream drainage conditions.

The Jamul region is subject to flooding. Hydrologic studies determined that the peak flow for Willow Creek during the 100-year storm event is 392 cubic feet per second (Martin and Ziemniak 2006, San Dieguito Engineering 2011). The channel cross-sections for this modeled floodplain vary in width from 26 to 68 feet within, or immediately adjacent to Willow Creek within the Gaming Facility project area. The JIV Gaming Facility includes two bridge span crossings of Willow Creek on the Reservation. The bridge abutments were placed outside of the flood zone; however, bridge pilings are located within the 100-year floodplain. A Preliminary Hydraulic Analysis (**Appendix 6**) concluded that upstream effects from the bridge abutments would be minimal. Additionally, the placement of bridge pillars within the 100-year floodplain would not

result in downstream impacts within the adjacent Rancho Jamul Ecological Reserve (RJER).

Construction of the optional fire station would comply with County codes and include storm water BMPs to control runoff. Development of the temporary parking/staging area was developed using erosion control materials over the existing ground surface. All disturbed areas would be restored and re-vegetated, thereby reducing storm runoff.

Improvements to Daisy Drive incorporate structural devices to control and treat runoff. Storm water from the roadway would be directed through a bioretention basin, vegetated swales, and riprap energy dissipaters, to reduce peak flows, avoid localized flooding and erosion, and improve water quality. The biorentention basin would be located near SR-94 and would drain to the swales along the SR-94 ROW.

If the access option of Daisy Drive is not selected, one of the two alternative access routes would be developed. The Reservation Road alternative would also incorporate structural devices by routing most of the storm water from the roadway to the Gaming Facility detention basin and associated facilities described above. The remaining storm water would be directed to the existing swales along SR-94. Development of the alternative new access road from Melody Road would likewise incorporate structural devices, including vegetated swales and riprap energy dissipaters. The new access road from Melody Road would require three new channel crossings. These facilities would be located outside of the ordinary high water mark or otherwise comply with United States Army Corps of Engineers (USACE) conditions.

#### 5.2.2.2 Water Quality

Construction of the JIV Gaming Facility has occurred in compliance with an Erosion Control Plan to ensure that sediment and other contaminants do not enter area waterways (**Appendix** 7).

To control storm water pollution and to protect water quality during the operational phase, the JIV Gaming Facility is utilizing a combination of site planning, structural treatment devices, and BMPs. To accomplish this, design considerations were chosen from the County of San Diego Standard Urban Stormwater Mitigation Plan for storm water treatment and Low Impact Development. Low Impact Development is an engineering design approach to managing storm water runoff to protect water quality.

Runoff from impervious areas would be conveyed through a series of gutters, drop inlets, and subterranean storm drain system, into a gravel detention facility. For additional treatment, green roofs covering the gaming facilities and a bioretention facility at the outlet of the gravel detention facility would be installed. Runoff west of the creek

would flow via curb and gutter, drop inlets, and a storm drain line to the bioretention facility adjacent to the creek, which provides treatment.

A green roof system would cover the gaming facilities. Since the green roof is in itself a detention and treatment facility, the County of San Diego does not require further storm water detention and treatment of runoff from these areas. Since they are self-contained, runoff from green roofs can easily be kept separate from other ground level improvements and can be discharged directly into Willow Creek without treatment or detention.

In addition to the structural controls designed into the JIV Gaming Facility, reduction of stormwater pollutant levels would be ensured through the use of source controls described in the San Diego County Stormwater Standards Manual. These standard would also apply to the development of the fire station, if developed. The Standards Manual requires commercial facilities to implement best management practices in the following areas: employee training; stormwater pollution prevention plans; storm drain tileage and signing; annual review of facilities and activities; pollution prevention; materials and waste management; vehicles and equipment; and outdoor areas.

Development of the temporary parking/staging area was developed using erosion control materials over the existing ground surface. All disturbed areas would be restored and re-vegetated, thereby reducing storm runoff volumes and the potential to carry sediments to Willow Creek.

Improvements to Daisy Drive incorporate structural devices to control and treat runoff. Storm water from the roadway would be directed through a bioretention basin, vegetated swales, and riprap energy dissipaters, to reduce peak flows, avoid localized flooding and erosion, and improve water quality. If developed, the Reservation Road alternative would also incorporate structural devices by routing most of the storm water from the roadway to the Gaming Facility detention basin and associated facilities described above. Likewise, the alternative development of the new access road from Melody Road would incorporate structural devices, including vegetated swales and riprap energy dissipaters.

The combination of structural devices and BMPs reduce pollutants in storm water to the maximum extent practicable. The residual pollutant concentration of the storm water runoff would not significantly affect water quality downstream. To verify control and appropriate reduction of contaminants in surface runoff, the JIV would implement a water quality monitoring program that includes testing for contaminants of concern. The combination of structural devices, best management practices, and monitoring ensure

that water quality is not significantly degraded by the Gaming Facility and associated facilities.

#### 5.2.2.3 Groundwater Quality

Please see discussion under water quality in **Section 5.2.2.2** for containment/treatment features designed to ensure compliance with water quality standards. Wastewater generated by operation of the Gaming Facility would be treated via a membrane bioreactor treatment (MBR) plant and demineralized with electrodialisis reversal (EDR), which would ensure blended effluent has a total dissolved solid concentration of 500 miligrams per liter or less. The MBR facility is designed for biological oxidation, nitrification, denitrification, and solids removal. Subsurface disposal of treated wastewater would conform to the EPA guidelines and RWQCB regulations. The quality of the excess treated water would be high and would improve groundwater quality, which is impaired by salinity, total dissolved solids, chlorides, nitrate, sulfate and aluminum. The level of wastewater treatment provided prior to disposal would ensure that groundwater quality would not be significantly affected by water disposal. Additionally, no groundwater would be extracted for potable use during construction/operation of the JIV Gaming Facility. Groundwater would not be used or impacted by development of the fire station, Daisy Drive, or the alternative access routes.

### 5.2.3 AIR QUALITY

#### 5.2.3.1 Criteria Pollutants

Operational criteria pollutant emissions for the JIV Gaming Facility (including fire station) were calculated using the URBEMIS2007 Version 9.2.4 computer model (URBEMIS 2007), and data from the URBEMIS2007 Version 9.2.4 *Users Guide* (SCAQMD 2007). Predicted operational emissions were then compared with applicable significance criteria listed in **Table 5-1**.

Mobile sources of criteria pollutants calculated by URBEMIS2007 include passenger vehicles; light-, medium-, and heavy-duty trucks; buses; motorcycles; and motor homes. For on-road mobile source emissions, URBEMIS2007 relies upon EMFAC2007, Version 2.3, developed by the California Air Resources Board (ARB). URBEMIS does not contain EMFAC files for San Diego County; therefore, the California Statewide emission factors were used. The Gaming Facility project is assumed to be in a rural location.

Area sources are sources of criteria pollutants that individually emit small quantities of pollutants, but can collectively contribute to significant quantities of pollutants. Area source emissions calculated for the Gaming Facility project by URBEMIS2007 include natural gas combustion for cooking, heating, and water heaters; fuel combustion from

landscape equipment; consumer products, such as hairspray, deodorants, cleaning products, spray paint, and insecticides[3]; and maintenance architectural coatings.

**TABLE 5-1**
**AIR QUALITY SCREENING LEVEL THRESHOLD**

| UNITS | VOC | $NO_X$ | CO | $SO_X$ | $PM_{10}$ | $PM_{2.5}$ |
|---|---|---|---|---|---|---|
| Lbs. per Hour | -- | 25 | 100 | 25 | -- | -- |
| Lbs. per Day | 75 | 250 | 550 | 250 | 100 | 55 |
| Tons per Year | 13.7 | 40 | 100 | 40 | 15 | 10 |

VOC = volatile organic compounds; $NO_X$ = oxides of nitrogen; CO = carbon monoxide; $SO_X$ = oxides of sulfur; $PM_{10}$ = suspended particulate matter; $PM_{2.5}$ = fine particulate matter
SOURCE: Ldn, 2011; EDS, 2015

Point sources of pollutants are stationary, identifiable sources of criteria pollutants and/or hazardous air pollutants (HAPs). Minor point sources of pollutants include, among other uses, char broilers, dry cleaners, gas stations, and auto body paint shops. Stationary sources emitting 25 tons or more per year of any criteria pollutant (or its precursor) are considered "major" point sources; examples include power plants, oil and gas field operations, and manufacturing plants. Point sources of pollutants typically require an operating permit by the local air district.

URBEMIS was used to evaluate the operational GHG emissions for the Gaming Facility project including the fire station. URBEMIS does not currently include emission estimates for GHGs other than $CO_2$, and, although emissions of GHGs other than $CO_2$, including $N_2O$, would result from Gaming Facility project-related activities, the emission levels are small in comparison to emission levels in the form of $CO_2$.

The JIV Gaming Facility includes a new 203,000 square-foot Gaming Facility structure, restaurants, a fire station, and 70,000 square feet of gaming area. Operation of the JIV Gaming Facility would result in an increase in emissions primarily from vehicle exhaust (mobile source emissions) and natural gas combustion, landscape equipment, consumer products, and maintenance architectural coatings (area source emissions). The number of trips generated by the JIV Gaming Facility is based upon the traffic report (source) prepared for the Gaming Facility. At buildout, the JIV Gaming Facility would generate 9,000 new daily trips (Kimley-Horn, 2012). To represent a conservative assessment, all new trips were assumed to occur at opening of the Gaming Facility.

[3] / Consumer products of concern commonly contain volatile organic compounds (VOCs) that, when emitted into the air, contribute to the formation of ozone. Consumer products may also contain toxic air contaminants and greenhouse gases.

Operational emissions are based on the description of the JIV Gaming Facility (**Section 3.4.1**) and assumptions using UREBMIS2007. Results of the modeling are provided in **Table 5-2,** Unmitigated Buildout Operational Air Emissions. As shown, criteria pollutant emissions from the JIV Gaming Facility would not exceed applicable thresholds. JIV Gaming Facility operation emissions would not conflict with or obstruct implementation of the applicable air quality plan, violate applicable air quality standards or contribute substantially to an existing or projected air quality violation, lead to a cumulatively considerable net increase in a nonattainment pollutant, or expose off-Reservation sensitive receptors to substantial pollutant concentrations.

**TABLE 5-2**
**OPERATIONAL AIR EMISSIONS (POUNDS/DAY)**

| OPERATIONAL EMISSION SOURCE | VOC | $NO_X$ | CO | $SO_X$ | $PM_{10}$ | $PM_{2.5}$ |
|---|---|---|---|---|---|---|
| Motor Vehicles | 34.4 | 90.3 | 397.5 | 0.6 | 84.3 | 16.8 |
| Area Sources | 1.4 | 1.4 | 2.7 | 0.0 | 0.0 | 0.0 |
| Total Unmitigated Emissions | 35.8 | 91.7 | 400.2 | 0.6 | 84.3 | 16.8 |
| County Thresholds | 75 | 250 | 550 | 250 | 100 | 55 |

VOC = volatile organic compounds; NOX = oxides of nitrogen; CO = carbon monoxide; $SO_X$ = oxides of sulfur; PM10 = suspended particulate matter; PM2.5 = fine particulate matter
Refer to **Appendix 8** for detailed assumptions and modeling output files.
SOURCE: Ldn, 2012; EDS, 2015

### 5.2.3.2 CO Hotspots

A CO hotspot is an area of localized CO pollution that is caused by severe vehicle congestion on major roadways, typically near intersections. Under specific meteorological conditions (e.g., stable conditions that result in poor dispersion), CO concentrations may reach unhealthy levels with respect to local sensitive land uses such as residential areas, schools, and hospitals. Prior to 1995, the SDAB was nonattainment for the 8-hour CO NAAQS; however, by 1995, CO levels in the air basin met the federal air quality test for attainment. The air basin was subsequently designated as a CO maintenance area in 1998 under NAAQS and has a federally approved CO maintenance plan (ARB 2005). Although the air basin is within a CO maintenance area, there is still potential for localized concentrations of CO and CO hotspots.

An appropriate qualitative screening procedure is provided in the procedures and guidelines contained in *Transportation Project-Level Carbon Monoxide Protocol* (Caltrans CO Protocol) to determine whether a project poses the potential for a CO hotspot (UCD ITS 1997). The Caltrans CO Protocol is an EPA approved methodology

and meets the requirements of the CAA and the CEQA. According to the Caltrans CO Protocol, a project within an area with an approved CO maintenance plan may be deemed "satisfactory" if it can be determined that it does not lead to a substantial increase in CO emissions. For projects involving more than one intersection or roadway segment, CO emissions must not increase in any of them individually.

A project within an area with an approved CO maintenance plan would be considered satisfactory and less than significant for CO hotspots if it:

1. Would not significantly increase the percentage of vehicles in cold start modes by 2% or more; and
2. Would not significantly increase traffic volumes by more than 5% over existing volumes and traffic speeds remain the same; and
3. Improves traffic flow, defined for intersection segments as an increase in average speed and as a decrease in average delay (for the purposes of this impact analysis, only intersection segments operating at LOS E or F with and without the project are evaluated); and
4. Does not move traffic closer to a receptor site.

According to the traffic report completed for the Gaming Facility (Kimley-Horn, 2012), with implementation of proposed mitigation measures, all intersections would operate at LOS D or better under the near term conditions with the JIV Gaming Facility. Therefore, the JIV Gaming Facility would not result in the creation of a new, or contribute to an existing, CO concentration violation.

#### 5.2.3.3 Toxic Air Contaminants

The JIV would obtain any necessary operating permits from the U.S. EPA to ensure proposed new or modified commercial and industrial equipment and operations comply with the federal CAA requirements. U.S. EPA requires that new and/or modified commercial and industrial equipment must be evaluated in accordance with applicable federal New Source Review (NSR) rules[4]. While, the JIV Gaming Facility does not include any significant new sources of potential toxic air contaminants (TACs), such as a central energy plant, the JIV Gaming Facility would include a central cooling and heating system, which is expected to include a boiler that would utilize propane for external combustion, as well as backup diesel-powered generators. The JIV Gaming Facility would also include commercial uses that may generate stationary sources of TACs such

[4] / The NSR permitting program, established in Congress in 1977, ensures that air quality is not significantly degraded from the addition of new and modified factories, industrial boilers and power plants. In areas with unhealthy air, NSR assures that new emissions do not slow progress toward cleaner air.

as restaurants with char broilers and fuel dispensers for Gaming Facility vehicles. If such equipment would emit 10 or more pounds per day of VOC, NOx, SOx, or PM10, it must employ the Best Available Control Technology (BACT) to reduce emissions[5]. For all sources that emit more than 100 tons per year of any regulated air contaminant and certain other specified sources[6] a Title V permit is required.

Operating permits would incorporate measures that would reduce potential TAC emissions and associated health risks from the gaming facilities to within applicable standards. With compliance with applicable rules and regulations, operation-related TAC emissions would not expose sensitive off-Reservation receptors to substantial concentrations of TACs.

### 5.2.3.4 Odor

The JIV Gaming Facility includes a wastewater treatment plant, which is typically considered a potential odor source. However, the wastewater treatment system and storage system would be a closed (sealed) system and no odor issue is anticipated. The only disposal of wastewater would be subsurface percolation.

### 5.2.3.4 Greenhouse Gas Emission

GHG emissions would be generated throughout the operational life of the JIV Gaming Facility via both mobile and area source emissions. Mobile emissions would be related to increased vehicle trips resulting from both employee and patron trips. Area source emissions would occur from stationary sources such as uses within the Gaming Facility, water conveyance, wastewater treatment plant/MVC and solid waste generation. Emissions of carbon dioxide ($CO_2$) are byproducts of fossil fuel combustion. Methane ($CH_4$), a highly potent GHG, results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. Nitrous oxide ($N_2O$) is produced naturally in the soil during the microbial processes and is mainly contributed to agricultural processes, nylon production, fuel-fired power plants, nitric acid production and vehicle emissions. To simplify greenhouse gas calculations, both $CH_4$ and $N_2O$ are converted to equivalent amounts of $CO_2$ and are identified as $CO_{2e}$. In other words, $CO_{2e}$ is an equivalent volume or mass of $CO_2$ converted from global warming potentials of other gases that may cause equivalent warming.

[5] / Best Available Control Technology is required under the federal Prevention of Significant Deterioration (PSD) program of the CAA: 40 C.F.R. 52.21(b)(50).
[6] / Title V applies to each pollutant subject to either a provision in the CAA or regulation adopted by EPA under the CAA that requires actual control of emissions of that pollutant (U.S. EPA 2008).

### *Transportation Related GHG Emissions*

Emissions from daily trips were quantified utilizing emission levels reported in grams/mile from the EMFAC2007 emission model. Vehicle emissions were then calculated using URBEMIS and converted to $CO_{2e}$ per year. The default setting for vehicle fleet mix was used as the JIV Gaming Facility would generate vehicle miles traveled (VMT) mostly from workers and patrons commuting to and from the Reservation. The fleet mix also incorporates buses and heavy truck trips. The JIV Gaming Facility would generate 9,000 ADT at full build out. Emissions due to new vehicle trips are estimated to be 7,730 MT of $CO_{2e}$ per year. In addition to these trips, there would be truck trips during winter months due to treated wastewater hauling needs. The total emissions due to new vehicle trips is approximately 7,766 MT of $CO_{2e}$ per year (Wastewater Addendum, Appendix 2; May 2015).

### *Electricity Related GHG Emissions*

The generation of $CO_2$, $CH_4$, and $N_2O$ from electricity is calculated utilizing methodologies within the California Climate Action Registry General Reporting Protocol Version 3.1- January 2009 (Registry Protocol). The Registry Protocol Electricity Emission Factors in pounds of GHG per kilowatt-hour for $CO_2$, $CH_4$, and $N_2O$ are 0.72412, 0.0000302 and 0.0000081, respectively. The JIV Gaming Facility is expected to use up to 6,600,000 KWh per year of electricity for the gaming floor, restaurants, retail shops, and wastewater treatment plant. This would generate approximately 2,177 MT of $CO_{2e}$ per year.

### *Water Usage Related GHG Emissions*

Water demand from the JIV Gaming Facility would indirectly utilize energy associated with the preparation and conveyance of water to the Reservation from the Otay Water District. It is estimated that indirect electricity for water conveyance requires 12,700 kilowatt hours (kWh) per Million Gallons (MG) (Source: http://www.greenbuildingadvisor.com/ book/export/html/18037). Water demand estimated that the JIV Gaming Facility would require 12,662,580 gallons each year, which would require 160,815 kWh of electrical energy to supply the expected yearly. This energy consumption would generate approximately 53 MT of $CO_{2e}$ per year.

### *Wastewater Treatment Related GHG Emissions*

An additional component of GHGs comes from the natural biochemical breakdown of waste within the water. As water is treated initially, suspended solids are allowed to settle to the bottom while cleaner water on top is siphoned off leaving wastewater sludge. The sludge is then collected where it can be further broken down within

anaerobic digesters that are sealed off from ambient air sources. The waste then is further broken down by bacteria creating methane ($CH_4$) and to a lesser extent Oxides of Nitrogen.

$NO_X$ ($CO_{2e}$) emissions from wastewater treatment are estimated to be roughly 22 percent of $CH_4$ ($CO_{2e}$) (Source: Draft Methane and Nitrous from Non-Agricultural Sources April 2005). Based on the Gaming Facility's anticipated water usage of 12,662,580 gallons or 47,933,082 liters of water per year and utilizing California Air Pollution Control Officers Association (CAPCOA's) baseline $CO_{2e}$ approximation, that for each liter of wastewater the Gaming Facility would produce 2.02 x 10-6 Metric Tons of $CO_{2e}$. It is estimated that the Gaming Facility project would produce 97 MT $CO_{2e}$ from $CH_4$. Utilizing the 22% ratio of $NO_X$ to $CH_4$, $NO_X$ generation could be as high as 21 MT. Therefore, the 200,000 gpd wastewater treatment plant is estimated to produce approximately 118 MT $CO_{2e}$ per year.

*Solid Waste Related GHG Emissions*

Solid waste generated from the JIV Gaming Facility would ultimately be discarded as trash and then deposited into a landfill. The decomposition of organic matter such as food, paper, yard trimmings and wood are anaerobically digested by bacteria, which primarily produces GHG's as a bi-product. However, organic decomposition occurs at different rates and is a function of the material content. The U.S. EPA) published various emission rates with units of Metric Tons of Carbon Dioxide Equivalent per Ton (Source: Solid Waste management and Greenhouse Gases; A Life-Cycle Assessment of Emissions and Sinks). Solid waste generated from the JIV Gaming Facility is estimated to generate 1,984 tons of trash each year. Utilizing the U.S. EPA emission factors, the $CO_{2e}$ emissions are expected to be approximately 239 MT per year.

*GHG Emission Summary*

Thus, total overall operational GHG emissions resulting from the JIV Gaming Facility are estimated to be approximately 10,516-MT $CO_{2e}$ per year.

## 5.2.4 BIOLOGICAL RESOURCES

### 5.2.4.1 Natural Habitats

Approximately 0.4 acres of natural habitat remains on the Reservation after construction of the JIV Gaming Facility. This habitat consists of coast live oak riparian habitat located along Willow Creek and would be preserved. If the optional fire station is developed on the 4-acre parcel, it would occur in an area previously developed. Development of the temporary parking/staging area on the 87-acre parcel would be restored with native

vegetation. Critical habitat for federally-listed species does not occur on the Reservation, 4-acre parcel or 87-acre parcel.

Construction of Daisy Drive would result in temporary and permanent impacts to habitats. Possible temporary impacts from construction could include: the introduction of litter which could affect wildlife feeding and other behaviors; unauthorized trespass by workers and/or equipment, which could cause trampling of vegetation or stress wildlife; increases in soil erosion and sedimentation, and deposition of particulate matter via fugitive dust as well as equipment exhaust, all of which could degrade vegetation and habitat quality. Habitat disturbance and degradation could, in turn, facilitate the increased spread of invasive plant species. These temporary adverse impacts were estimated by assuming that an additional ten-foot wide corridor might be affected beyond the project footprint; this 10-foot corridor may also be needed for access of construction vehicles and equipment. This 10-foot corridor includes areas on private lands that would require a temporary construction easement and may impact sensitive habitat types, as well as areas within the Caltrans ROW that are already urbanized or paved. **Table 5-3** shows the vegetation community types that would be temporary affected by the construction of Daisy Drive.

Permanent impacts to vegetation communities would occur from grading, cut and fill, the extension of culverts and drainage crossings, and road widening and paving. Permanent impacts were calculated in GIS by overlaying the project footprints (including retaining wall footers, cut and fill lines, and roadbeds) upon the digitized vegetation community boundaries. **Table 5-3** shows the vegetation community types that would be permanently affected.

If the access option of Daisy Drive is not selected, one of the two alternative access routes would be used. **Table 5-3** shows the vegetation community types that would be temporary and permanently affected by construction of Reservation Road and new road from Melody Road.

### 5.2.4.2 Federally Listed Species

Various special-status species occur in the vicinity of the Gaming Facility project site, but none were detected within the site in wildlife and botanical surveys performed over the last decade. Furthermore, none of these regionally-occurring special-status species were ranked in the Biological Assessment with a moderate or high potential of occurrence on the Gaming Facility project site. Protocol surveys conducted from 2011 through 2013 for the federally listed endangered Quino Checkerspot Butterfly (*Euphydryas editha quino*), federally listed endangered Least Bell's Vireo (*Vireo bellii pusillus*), federally listed threatened Coastal California Gnatcatcher (*Polioptila californica*

**TABLE 5-3**
**VEGETATION COMMUNITY TYPES AFFECTED**
**BY ROAD ACCESS CONSTRUCTION**

| VEGETATION COMMUNITY TYPE | DAISY DRIVE | ALTERNATIVE ACCESS OPTIONS | |
|---|---|---|---|
| | | RESERVATION ROAD | NEW ACCESS FROM MELODY RD |
| | ACRES | ACRES | ACRES |
| **Permanent Impacts** | | | |
| Non-Native Grassland | 0.79 | 0.95 | 4.68 |
| Diegan Coastal Sage Scrub | 0.00 | 0.05 | 0.00 |
| Southern Coast Live Oak Riparian Forest | 0.22 | 0.22 | 0.57 |
| Totals | 1.01 | 1.22 | 5.25 |
| **Temporary Impacts** | | | |
| Non-Native Grassland | 0.61 | 0.48 | 1.68 |
| Diegan Coastal Sage Scrub | 0.00 | 0.03 | 0.00 |
| Southern Coast Live Oak Riparian Forest | 0.06 | 0.06 | 0.14 |
| Totals | 0.67 | 0.57 | 1.82 |
| SOURCE: Natural Investigations, Inc., 2014 | | | |

*californica*), and federal candidate Hermes Copper Butterfly (*Lycaena hermes*) resulted in negative findings (**Appendix 9**).

Operation of the JIV Gaming Facility (including the fire station and temporary parking/staging area) would not result in the take of any listed species. To address the potential impact of noise and light pollution upon wildlife, the Gaming Facility mitigates potential impacts by design. Specifically, noisy machinery would be located in areas that naturally-attenuate noise or sound barriers would be constructed. Best management practices for reducing light pollution from exterior lighting would be implemented, such as shielding and selection of appropriate bulb technologies. The exterior of buildings would include downcast lighting consistent with local codes and ordinances to maintain consistency with the surrounding area. Lighting from the front of Gaming Facility buildings would be directionally pointed away from the adjacent reserves and shielding employed. Lighting in the back of Gaming Facility buildings would consist of low wattage security and safety lighting near doorways consistent with Uniform Building Code requirements. Furthermore, construction of the fire station, if developed would the

Willow Creek channel and riparian corridor, which may function as a wildlife corridor. Thus, animals requiring a wildlife corridor would not be affected.

Construction of Daisy Drive would include the realignment and widening of SR-94 and improvements to the intersection of SR-94 and Melody Road. Field surveys over the last decade have not detected any special-status species within the roadway improvement area. Their absence within the project area might be explained by the preponderance of exotic/competing species, and habitat degradation associated with urbanization and cattle grazing. Nevertheless, several special-status species have the potential to occur where suitable habitat is present (primarily on the hills with remnants of coastal sage scrub and rock outcrops on the 87-acre parcel and in the Willow Creek riparian corridor). Special-status bird species in the vicinity include Coastal California gnatcatcher, Least Bell's vireo, and yellow-billed cuckoo, although no nests were observed during field surveys. The improvements would be completed in compliance with state and federal regulations and mitigation measures that would be adopted by Caltrans' as part of the SR-94 Improvement Project. These measures would likely include seasonal limitations on vegetation clearing, pre-construction surveys and the establishment of buffers around any nesting birds.

If the access option of Daisy Drive is not selected, one of the two alternative access routes would be used. Improvements to Reservation Road or the development of a new access road from Melody Road would also include the realignment and widening of SR-94 and improvements to the intersection of SR-94 and Melody Road. The potential to disturb special-status bird species is the same as for Daisy Drive. The alignment of the new access road from Melody Road would also impact existing habitat located on the 87-acre parcel for the federally listed Quino checkerspot butterfly (four stands of approximately 16 square feet of dwarf plantain), and habitat for a federal candidate species, the Hermes Copper Butterfly (two stands of approximately 8 square feet of spiny redberry). The improvements would be completed in compliance with state and federal regulations and mitigation measures that would be adopted by Caltrans' as part of the SR-94 Improvement Project. These measures would likely include pre-construction surveys, avoidance measures, and the purchase of compensatory habitat.

#### 5.2.4.3 Migratory Birds

A pre-construction site survey conducted prior to construction of the Gaming Facility, as well as on-going biological monitoring during the entire excavation practice revealed no migratory birds were present or affected by site work. These measures would also be implemented during construction of the fire station (if developed) and restoration of the temporary parking/staging area.

Construction of Daisy Drive or the alternative access road options would include the realignment and widening of SR-94 and improvements to the intersection of SR-94 and Melody Road. As described in **Section 5.2.4.2**, construction activities have the potential to disturb nesting birds. Migratory birds and raptors, which are protected by the Migratory Bird Treaty Act could also be affected. Such disturbance would be avoided through the implementation of required mitigation measures, including seasonal limitations on vegetation clearing, pre-construction surveys and the establishment of buffers around any nesting birds.

#### 5.2.4.4 Waters of the U.S.

Water features in the project area subject to USACE jurisdiction under the Clean Water Act (CWA) consist of Willow Creek, its tributaries, and instream riverine marshes (**Figure 4-7**). No wetlands, vernal pools, or other water features are present on the Reservation or areas of the adjacent 4-acre parcel and 87-acre parcel that are within the Gaming Facility project area.

The design of the JIV Gaming Facility and associated facilities (including the optional fire station) avoid the entire channel of Willow Creek.

Construction of Daisy Drive or the alternative access road options would include the realignment and widening of SR-94 and improvements to the intersection of SR-94 and Melody Road. These roadway improvements would require the permanent placement of fill or structures or other alterations to protected channels, or the clearing of riparian vegetation. The estimated areas (acreage) of impact are shown in **Table 5-4**. Construction activities could also temporarily impact channels by the placement of fill within the channel, or by increasing erosion or sedimentation in receiving water bodies due to soil disturbance. Any activities within Waters of the U.S. would be conducted under a Section 404 permit, which would require measures to minimize and compensate for any impacts.

#### Habitat Connectivity and Wildlife Corridors

Willow Creek and its tributaries provide the main wildlife corridors in the project area. The channel of Willow Creek and its associated riparian habitat have been preserved on the Reservation. The fire station, if developed, would be constructed on the 4-acre parcel in a previously developed area and would not affect existing habitat or wildlife corridors.

**TABLE 5-4**
**ROAD ACCESS IMPACTS TO WATERS OF THE U.S.**

| VEGETATION COMMUNITY TYPE | DAISY DRIVE | ALTERNATIVE ACCESS OPTIONS | |
|---|---|---|---|
| | | RESERVATION ROAD | NEW ACCESS FROM MELODY RD. |
| | ACRES | ACRES | ACRES |
| **Permanent Impacts** | | | |
| Channels | 0.05 | 0.05 | 0.10 |
| Wetlands | 0.00 | 0.00 | 0.00 |
| Totals | 0.05 | 0.05 | 0.10 |
| **Temporary Impacts** | | | |
| Channels | 0.01 | 0.01 | 0.02 |
| Wetlands | 0.00 | 0.00 | 0.00 |
| Totals | 0.01 | 0.01 | 0.02 |
| SOURCE: Natural Investigations, Inc., 2014 | | | |

Construction of Daisy Drive would include the realignment and widening of SR-94 and improvements to the intersection of SR-94 and Melody Road. These improvements would involve the erection of fencing, walls, or other wildlife barriers. In many instances, the erection of these retaining walls is seen as a beneficial impact because they discourage animals from entering the SR-94 right-of-way, which is a potential source of mortality. The retaining walls would encourage wildlife to stay in the stream corridor or cross underneath existing culverts and bridges. Existing stormwater collection features (primarily pipe culverts) in the project area and vicinity provide some passage for small animals. As part of the improvements, three culverts would be replaced with enlarged and upgraded culverts. These improved culverts would maintain or increase the heights of current under-road passageways for animals; this would result in a net increase in the size of wildlife corridors within the area.

The two alternative access routes would also result in the improvement of culverts and wildlife corridors. However, the construction of the new access road from Melody Road would occur in a sensitive area designated as hardline preserve, which would cause habitat fragmentation and reduce wildlife corridors and wildlife movement.

### 5.2.5 CULTURAL AND PALEONTOLOGICAL RESOURCES

Section 106 requires that potential impacts to historic properties are assessed by using the “criteria of adverse effect” (36 CFR 800.5[a][1]): “An adverse effect is found when an

undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative."

Impacts to cultural resources are being considered in the context of Section 106 of the NHPA and NEPA.

No cultural resources that meet the definition of historic property or historical resource have been documented within the Reservation. During excavation of the Gaming Facility, archaeological monitoring was conducted as stipulated in the Mitigation Monitoring and Reporting Plan adopted by JIV. No cultural resources were encountered during excavation on the Reservation.

Development of the fire station may occur on the 4-acre parcel where cultural resources have been recorded. Based on results of subsurface site investigation, the one recorded site within the 4-acre parcel was determined by SHPO to be ineligible for NRHP listing. As such, no cultural resources that meet the definition of historic property or historical resource are documented to occur within the 4-acre parcel. Prior to use of the 4-acre parcel for staging and use of a portion of the 87-acre parcel for temporary parking, a pedestrian cultural resources survey was undertaken

Completion of Daisy Drive would include the realignment and widening of SR-94 and improvements to the intersection of SR-94 and Melody Road. Although the area where these improvements would occur have been disturbed by prior roadway construction or other activities, the area is considered highly sensitive for the discovery of prehistoric, ethnohistoric or historic cultural material or subsurface features. Two known historic properties/historical resources are mapped immediately adjacent to the area of roadway improvements. Construction in these areas would comply with mitigation measures to avoid potential disturbance of these resources; these measures include monitoring by a qualified archeologist of earth-disturbing work, worker education and other inadvertent discovery measures.

Geologic formations that underlie the project area have an extremely low probability of containing paleontological resources. No paleontological resources have been encountered during construction of the Gaming Facility.

## 5.2.6 SOCIOECONOMIC AND ENVIRONMENTAL JUSTICE CONDITIONS

### 5.2.6.1 Housing

The JIV Gaming Facility's creation of 1,611 new long-term jobs within San Diego County may result in increased housing demand due to the relocation of workers. Increased housing demand is expected to be met by vacant housing units available in the region, primarily in the East and South Suburban residential areas where 11,718 vacant units are estimated to be available (SANDAG, 2015). Looking forward, SANDAG has estimated that the East and South Suburban Areas would experience a cumulative growth of 21,303 housing units by 2020 (SANDAG, 2013). Of the 321,373 total housing units projected to exist in 2020 in the East and South Suburban Areas, approximately 12,218 units are projected to be vacant assuming 4.1 percent and 3.3 percent vacancy rates for the East and South Suburban Areas, respectively (SANDAG, 2013). Employment generated housing demand from the JIV Gaming Facility would be accommodated by existing and future vacant units in the East and South Suburban Areas and, thus, would not result in significant increases in housing demand to the region.

The amount of vacant housing units in addition to the projected increase in the number of housing units, and the amount of undeveloped residential-acres available in the region would provide an ample amount of residential opportunities to meet the demands of the JIV Gaming Facility. A marginally higher employment/housing ratio can be expected in the short term; however, this is not seen as adverse, due to the currently low employment/housing ratio in the Jamul Sub-Regional Area. Therefore, the JIV Gaming Facility would not likely induce "disorderly" residential growth within San Diego County either directly or indirectly.

### 5.2.6.2 Employment and Fiscal Effects

The JIV Gaming Facility would result in an estimated 1,611 permanent jobs. For purposes of this analysis, 100 percent of the total permanent jobs are assumed to be new jobs – jobs created in the economy rather than lateral shifts from one job to another without labor force replacement. Thus, the total of *new* permanent jobs that would be created is estimated to be 1,611 at full buildout of the gaming complex. Compared to the County's current overall employment level, the number of net new jobs is not significant. However, it becomes more significant when compared to the creation of new jobs in the local Jamul area and in the East and South Suburban Metropolitan Statistical Areas (MSAs).

For purposes of this analysis, it is assumed that a vast majority (90 percent) of the job demand generated by the Gaming Facility project would be met within the East and

South Suburban planning areas, as well as within the Jamul Planning area. The 2012 (most recent data available) estimate for total jobs within the East and South Suburban Statistical Areas is 133,901 and 102,808 respectively (SANDAG, 2013). When compared to the employment level in the combined areas, new job creation from the Gaming Facility would represent around 0.68 percent of total jobs available. Projecting out to the year 2020, total new jobs generated by the casino would represent 0.58 percent of total jobs available. Since the labor force for the Jamul area is small, it is estimated that a small percentage (5 percent) of the workers hired by the Gaming Facility project would come from the Jamul Planning area. Thus, 81 net new jobs for the area were estimated to be created for this area at buildout. The estimate for total jobs within the Jamul Sub-Regional area is 3,085, while that number is projected to increase to 3,336 by 2020 (SANDAG, 2013). The estimated new jobs represent approximately 2.6 percent of the 2012 Jamul Sub-Regional Area employment. Projecting out to the year 2020, total new jobs generated by the Gaming Facility project would also represent 2.4 percent of total jobs available within the Jamul Sub-Regional Area.

The JIV Gaming Facility would not result in a significant employment demand in San Diego County given the relatively low percentage of overall jobs that the casino facility would represent (when compared to the overall number of jobs in the area), coupled with the countywide unemployment rate of 4.8%. This provides an existing pool of labor within the County well beyond the demand created by the JIV Gaming Facility. Employment opportunities are considered a beneficial effect.

The Gaming Facility is expected to drive increases in economic activity, employment, and income for the San Diego economy from the ongoing effects from operation of the Gaming Facility. The Gaming Facility project would include a gaming area in addition to associated food and beverage establishments. The Gaming Facility would generate about $200 million in total revenues annually.

Economic effects are described as the sum of the economic activity within a defined geographic region resulting from an initial change in the economy. This initial change spurs a series of subsequent indirect and induced activities (the re-spending of dollars) as a result of interconnected economic relationships. A direct economic effect is the initial change in the economy attributed to the core development of the Jamul development, i.e., new jobs, output, and earnings generated directly by the development. Indirect and induced economic effects, commonly referred to as the “multiplier effect”, include earnings and employment generated as a result of the purchases of the industries which supply goods and services to the development. Induced economic effects include additional output, earnings and employment generated as a result of the purchases made by Gaming Facility project employees.

The ongoing operations are projected to generate direct impacts of $150 million per year. This includes approximately $69 million in earnings, supporting about 1,611 jobs onsite. Re-spending of this initial impact is projected to generate an additional $106 million in output and an additional 810 jobs throughout the San Diego County economy. Anticipated total one-time expenditures from the operations of the Gaming Facility are $260 million. Of this amount, $136 million is projected to be paid in earnings, supporting 2,420 jobs.

Gaming facility generated expenditures for operation would be dispersed and distributed among a variety of different industries and businesses throughout the County. The indirect and induced output would be considered beneficial fiscal effects.

Public services would be provided to the Reservation during operation of the Gaming Facility. These public service demands would result in costs being expended by the service providers for services such as potable water, solid waste services, emergency medical services, and law enforcement. Impacts to select public services are evaluated in **Section 5.3.8** *Public Services*. As applicable, the JIV would be required to compensate the service providers for services rendered.

#### 5.2.6.3 Environmental Justice

According to the U.S. Census, there are no low-income or minority populations within the project area. The local census tract has higher household incomes and lower racial diversity than the County as a whole. Therefore, the JIV Gaming Facility would not result in environmental justice effects.

### 5.2.7 RESOURCE USE PATTERNS

#### 5.2.7.1 Transportation/Circulation

Operation of the Gaming Facility would generate traffic, primarily as the result of patron and employee trips. This section is based on a 2014 Traffic Impact Study prepared by Kimley-Horn and Associates as part of Caltrans environmental review of the SR-94 Improvement Project.

*Analysis Scenarios*

The analysis evaluates different scenarios to identify the projected levels of service on the affected roadways and intersections not only within the context of the existing conditions, but also relative to conditions anticipated in the future when other developments in the area are expected to contribute to traffic in the area. The purpose of evaluating different scenarios is to provide context and perspective of the future no

action conditions and the Proposed Action's contributions to existing and future traffic conditions. The context of each scenario is described in further detail below.

It should be noted that the scenarios address access and intersection improvements that were identified in the Tribal EE prepared for the JIV Gaming Development Project and further reviewed by Caltrans as part of the SR-94 Improvement Project. Further, the traffic impact analysis scenarios include both weekday and weekend scenarios to ensure the analysis takes into account the difference in traffic volumes associated with the Gaming Facility operations on weekdays and weekends.

The conditions of the three traffic scenarios are based on the following:

## Existing Conditions

This represents the traffic conditions with the addition of the traffic volumes generated by the Gaming Facility. Traffic conditions assume the completion of intersection and access-road improvements included in Caltrans SR-94 Improvement Project.

Existing peak-hour traffic counts were collected between 2009 and 2012, and nominally represents the year 2013.

## Near-Term Conditions

This scenario includes projected traffic growth based on potential projects in the study area, and nominally represents the year 2015. In addition to the JIV Gaming Facility, there are fourteen potential cumulative projects that could add traffic to the study area. These projects are unrelated to the Gaming Facility. They have been previously proposed, and in many cases they have not been built or have not been built-out to their entitled density. These cumulative projects are included in the Near-Term analysis because they represent development projects that are likely to be constructed before other roadway improvements assumed to be in place in the 2035 Horizon Year analysis are completed. These projects include the following:

1. ***TPM 20550 (Morgan Minor Subdivision)*** proposes to construct 2 single-family estate homes. The project site is proposed north of the Procter Valley Road/Poplar Meadow Lane intersection. The project's anticipated daily traffic was manually calculated using SANDAG's *Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region* (April 2002) ("SANDAG's Trip Rates") for estate homes. The project trips were calculated to generate 24 ADT with 1 inbound/1 outbound trip during the AM peak-hour and 1 inbound/1 outbound trip during the PM peak-hour.

2. ***TM 5154 RPL1 (Hendrix Subdivision)*** is located east of SR-94 (Campo Road) on Las Palmas Road. The project proposes to develop 5 single-family estate homes. The project trips were manually calculated using SANDAG's Trip Rates for estate homes. The project is calculated to generate 60 ADT with 2 inbound/3 outbound trips during the AM peak-hour and 4 inbound/2 outbound trips during the PM peak-hour.

3. ***TM 5213 RPL2 (Mintz Subdivision)*** is located north of Skyline Truck Trail and east of Hidden Trail drive. The project proposes to develop approximately 25-acres of land into 10 single-family estate homes. The project trips were manually calculated using SANDAG's Trip Rates for estate homes. The project is calculated to generate 120 ADT with 3 inbound/7 outbound trips during the AM peak-hour and 8 inbound/4 outbound trips during the PM peak-hour.

4. ***TM 5289 RPL2 (Jamul Highlands Subdivision)*** proposes to construct 25 single-family estate homes. The project site is proposed south of the Valley Road/Jamul Highlands Road intersection. The project trips were manually calculated using SANDAG's Trip Rates for estate homes. The project is calculated to generate 300 ADT with 7 inbound/l9 outbound trips during the AM peak-hour and 21 inbound/9 outbound trips during the PM peak-hour.

5. ***TPM 20626*** proposes to construct 3 single-family estate homes. The project site is proposed on the west side of Procter Valley Road, just north of the Proctor Valley Road/Melody Road intersection. The project trips were manually calculated using SANDAG's Trip Rates for estate homes. The project is calculated to generate 36 ADT with 1 inbound/2 outbound trips during the AM peak-hour and 3 inbound/1 outbound trips during the PM peak-hour.

6. ***TPM 20628 RPLI (Yacoo Minor Subdivision)*** proposes to construct 4 single-family estate homes. The project site is proposed on Schlee Canyon Road north of Procter Valley Road. The project trips were manually calculated using SANDAG's Trip Rates for estate homes. The project is calculated to generate 48 ADT with 1 inbound/3 outbound trips during the AM peak-hour and 4 inbound/1 outbound trips during the PM peak-hour.

7. ***A Residential Development*** is proposed on land situated just east of the Proposed Project and south of Olive Vista Drive. The project proposes to develop 20 single-family estate homes. The project trips were manually calculated using SANDAG's Trip Rates for estate homes. The project is calculated to generate 240 ADT with 6 inbound/13 outbound trips during the AM peak-hour and 17 inbound/7 outbound trips during the PM peak-hour.

8. ***TPM 20599 RPLI (Blanco Parcel Map)*** proposes to construct 4 single-family estate homes. The project site is proposed on the east side of SR-94, north of the Melody Road. The project trips were manually calculated using SANDAG's Trip Rates for estate homes. The project is calculated to generate 48 ADT with l inbound/3 outbound trips during the AM peak-hour and 4 inbound/1 outbound trips during the PM peak-hour.

9. ***TPM 20868 (Stein Barth Minor Subdivision)*** is located just north of the Proposed Project and south of Olive Vista Drive. The project proposes to develop 2 single-family estate homes. The project trips were manually calculated using SANDAG's Trip Rates for estate homes. The project is calculated to generate 24 ADT with 1 inbound/1 outbound trip during the AM peak-hour and 1 inbound/1 outbound trip during the PM peak-hour.

10. ***TPM 20594 (Pioneer Minor Subdivision)*** is located just west of the Proposed Project and north of Melody Lane. The project proposes to develop 3 single-family estate homes. The project trips were manually calculated using SANDAG's Trip Rates for estate homes. The project is calculated to generate 36 ADT with 1 inbound/2 outbound trips during the AM peak-hour and 3 inbound/1 outbound trips during the PM peak-hour.

11. ***Otay Ranch -Village 19*** is located south west of the Proposed Project and south of Melody Lane. The project proposes to develop 20 single-family estate homes. The project trips were manually calculated using SANDAG's Trip Rates for estate homes. The project is calculated to generate 240 ADT with 6 inbound/13 outbound trips during the AM peak-hour and 17 inbound/7 outbound trips during the PM peak-hour.

12. ***Jamul Estates II*** is located just north east of the Proposed Project. The maximum allowable developable lots are 68 single-family estate homes based on the current zoning and for purposes of this EIR it is conservatively assumed that all 68 would be approved/built. Therefore, the project trips associated with such 68 homes were manually calculated using SANDAG's Trip Rates for estate homes. The project is calculated to generate 816 ADT with 20 inbound/46 outbound trips during the AM peak-hour and 57 inbound/24 outbound trips during the PM peak-hour.

13. ***Simpson Farms*** is generally located on the northeast corner of the SR-94 (Campo Road)/Jefferson Road intersection in the Jamul Community of San Diego County. The project proposes to develop 98 single-family estate homes and 115,000 square feet (sf) of commercial uses. Therefore, the project trips

associated with this project were manually calculated using SANDAG's Trip Rates. The project trips were calculated to generate approximately 6,500 ADT with approximately 124 inbound/130 outbound trips during the AM peak-hour and 323 inbound/275 outbound trips during the PM peak-hour.

14. ***Peaceful Valley Ranch*** project entails the subdivision of 181.31-acres for an estate residential development including, 46 new estate residential lots, a 6.7-acre equestrian facility and a new joint-use fire and administration offices for the Rural Fire Protection District and the US Fish and Wildlife Services. The project is located east of SR-94 and would use the intersection of SR-94 and Melody Road as a single access point. The project trips associated with this project were manually calculated using SANDAG's Trip Rates. The total project is calculated to generate approximately 750 ADT with 43 inbound/46 outbound trips during the AM peak hour and 56 inbound/46 outbound trips during the PM peak hour.

Near-Term traffic conditions also assume the completion of intersection improvements included in Caltrans SR-94 Improvement Project. No other roadway network changes are assumed.

## Horizon Year Conditions

This scenario represents the traffic conditions of the road network to be in place under Horizon Year (2035) Conditions, consistent with the San Diego Association of Governments (SANDAG) Series 11 and 12 Regional Transportation Forecast Models, and is used to establish long-term conditions for evaluating cumulative impacts. This scenario includes a projected traffic growth based on the addition of the JIV Gaming Facility and other potential projects in the study area. Traffic conditions assume the completion of intersection and access-road improvements included in Caltrans SR-94 Improvement Project.

### *JIV Gaming Facility Trip Generation*

Trip generation rates for the JIV Gaming Facility were developed in consultation with Caltrans based on comparable gaming facilities in California. The JIV Gaming Facility development would generate a total of 9,000 average daily trips. Of these daily trips, approximately 599 (420 in, 179 out) trips would occur during the weekday morning peak-hour period. During the weekday afternoon peak-hour period, the Gaming Facility project would generate 1,005 (533 in, 472 out) trips. During each of the Friday and Saturday peak-hour periods, the Gaming Facility project would generate 1,401 (645 in, 756 out) trips.

### *Access Road Options*

This analysis assumes the use of Daisy Drive as described in Caltrans' SR-94 Improvement Project. If the access option of Daisy Drive is not selected as the access road option, either Reservation Road or the new access from Melody would be used to provide access (see **Section 3.4.1** for details). This analysis evaluates all three access road options.

### *Caltrans Target Level of Service*

Because SR-94 is a state route maintained by Caltrans, SR-94 and all intersections along SR-94 are within Caltrans' jurisdiction. Caltrans endeavors to maintain a target level of service (LOS) at the transition between LOS "C" and LOS "D" for all of its facilities.

### *San Diego County Target Level of Service*

According to San Diego County's guidelines for determining significance, LOS D and above is acceptable for intersections and roadway segments.

### Existing Conditions

This represents the traffic conditions with the addition of the traffic volumes generated by the Gaming Facility. Traffic conditions assume the completion of intersection and access-road improvements included in Caltrans SR-94 Improvement Project. No other roadway network changes are assumed to be in place under this scenario.

**Intersection Analysis**

**Tables 5-6** and **5-7** presents the peak-hour LOS analysis results for the study intersections under weekday and typical Friday/Saturday conditions, respectively. As shown in the tables, all intersections would operate acceptably at LOS C or better during all peak-hour periods analyzed, with the exception of the intersection of SR-94 and Jamacha Road, which would operate at LOS D at the Friday PM peak-hour. **Figures 4-9** and **4-10** show the locations and geometrics of the study intersections.

In addition to the intersections along SR-94, the following County of San Diego intersections were also analyzed. The locations of these intersections are shown in **Figure 4-9**. All of these intersections would operate acceptably at LOS D or better under weekday and Friday/Saturday peak hour conditions (Kimley-Horn and Associates, 2012).

**TABLE 5-6**
**INTERSECTION LOS**
**EXISTING WEEKDAY PEAK-HOUR CONDITIONS**

| INTERSECTIONS | | PEAK HOUR | DAISY DRIVE | | ALTERNATIVE ACCESS OPTIONS | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | RESERVATION ROAD | | NEW ACCESS FROM MELODY ROAD | |
| | | | DELAY (a) | LOS (b) | DELAY (a) | LOS (b) | DELAY (a) | LOS (b) |
| 1 | SR-94 & Via Mercado | AM | 22.5 | C | 22.5 | C | 22.5 | C |
| | | PM | 27.9 | C | 27.9 | C | 27.9 | C |
| 2 | SR-94 & Jamacha Blvd. | AM | 18.0 | B | 18.0 | B | 18.0 | B |
| | | PM | 28.9 | C | 28.9 | C | 28.9 | C |
| 3 | SR-94 & Jamacha Rd. | AM | 24.7 | C | 24.7 | C | 24.7 | C |
| | | PM | 28.5 | C | 28.5 | C | 28.5 | C |
| 4 | SR-94 & Cougar Canyon Rd. | AM | 19.5 | B | 19.5 | B | 19.5 | B |
| | | PM | 15.0 | B | 15.0 | B | 15.0 | B |
| 5 | SR-94 & Steele Canyon Rd. | AM | 19.0 | B | 19.0 | B | 19.0 | B |
| | | PM | 22.4 | C | 22.4 | C | 22.4 | C |
| 6 | SR-94 & Indian Springs Dr./Lyons Valley Rd. | AM | 12.0 | B | 12.0 | B | 12.0 | B |
| | | PM | 8.3 | A | 8.3 | A | 8.3 | A |
| 7 | SR-94 & Proctor Valley Rd./Jefferson Rd. | AM | 13.3 | B | 13.3 | B | 13.3 | B |
| | | PM | 13.6 | B | 13.6 | B | 13.6 | B |
| 8 | SR-94 & Maxfield Rd. | AM | 13.2 | B | 13.2 | B | 13.2 | B |
| | | PM | 20.5 | C | 20.5 | C | 20.5 | C |
| 9 | SR-94 & Melody Rd./Peaceful Valley Ranch Rd. | AM | 4.8 | A | 4.8 | A | 18.3 | B |
| | | PM | 6.2 | A | 6.2 | A | 19.4 | B |
| 10 | SR-94 & Reservation Rd. | AM | 4.8 | A | 4.8 | A | No intersection under this scenario. | |
| | | PM | 7.0 | A | 7.0 | A | | |
| 11 | SR-94 & Honey Springs Rd. | AM | 13.1 | B | 13.1 | B | 13.1 | B |
| | | PM | 12.3 | B | 12.3 | B | 12.3 | B |
| 12 | SR-94 & Otay Lakes Rd. | AM | 14.5 | B | 14.5 | B | 14.5 | B |
| | | PM | 16.0 | C | 16.0 | C | 16.0 | C |

Notes:
(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.
(b) LOS calculations are based on the methodology outlined in the *2000 Highway Capacity Manual* and performed using Synchro 8.0
Source: Kimley-Horn and Associates, 2014

13. Jamacha Boulevard and Sweetwater Springs Road
14. Willow Glen Drive and Jamacha Road
15. Steele Canyon Road and Willow Glen Drive
16. Steele Canyon Road and Jamul Drive
17. Lyons Valley Road and Jamul Drive
18. Jefferson Road and Lyons Valley Road
19. Melody Road and Proctor Valley Road

**TABLE 5-7**
**INTERSECTION LOS**
**EXISTING FRIDAY/SATURDAY PEAK HOUR CONDITIONS**

| INTERSECTIONS | | PEAK HOUR | DAISY DRIVE | | ALTERNATIVE ACCESS OPTIONS | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | RESERVATION ROAD | | NEW ACCESS FROM MELODY ROAD | |
| | | | DELAY (a) | LOS (b) | DELAY (a) | LOS (b) | DELAY (a) | LOS (b) |
| 1 | SR-94 & Via Mercado | FRI PM | 34.7 | C | 34.7 | C | 34.7 | C |
| | | SAT PM | 18.0 | B | 18.0 | B | 18.0 | B |
| 2 | SR-94 & Jamacha Blvd. | FRI PM | 28.9 | C | 28.9 | C | 28.9 | C |
| | | SAT PM | 19.8 | B | 19.8 | B | 19.8 | B |
| 3 | SR-94 & Jamacha Rd. | FRI PM | 46.1 | **D** | 46.1 | **D** | 46.1 | **D** |
| | | SAT PM | 31.2 | C | 31.2 | C | 31.2 | C |
| 4 | SR-94 & Cougar Canyon Rd. | FRI PM | 16.3 | B | 16.3 | B | 16.3 | B |
| | | SAT PM | 20.4 | C | 20.4 | C | 20.4 | C |
| 5 | SR-94 & Steele Canyon Rd. | FRI PM | 24.4 | C | 24.4 | C | 24.4 | C |
| | | SAT PM | 22.9 | C | 22.9 | C | 22.9 | C |
| 6 | SR-94 & Indian Springs Dr./Lyons Valley Rd. | FRI PM | 10.1 | B | 10.1 | B | 10.1 | B |
| | | SAT PM | 8.2 | A | 8.2 | A | 8.2 | A |
| 7 | SR-94 & Proctor Valley Rd./Jefferson Rd. | FRI PM | 17.2 | B | 17.2 | B | 17.2 | B |
| | | SAT PM | 21.9 | C | 21.9 | C | 21.9 | C |
| 8 | SR-94 & Maxfield Rd. | FRI PM | 23.0 | C | 23.0 | C | 23.0 | C |
| | | SAT PM | 17.9 | C | 17.9 | C | 17.9 | C |
| 9 | SR-94 & Melody Rd./Peaceful Valley Ranch Rd. | FRI PM | 6.8 | A | 6.8 | A | 26.3 | C |
| | | SAT PM | 6.8 | A | 6.8 | A | 18.4 | B |
| 10 | SR-94 & Daisy Dr. or Reservation Rd. | FRI PM | 9.0 | A | 9.0 | A | No intersection under this scenario. | |
| | | SAT PM | 7.7 | A | 7.7 | A | | |
| 11 | SR-94 & Honey Springs Rd. | FRI PM | 14.2 | B | 14.2 | B | 14.2 | B |
| | | SAT PM | 12.2 | B | 12.2 | B | 12.2 | B |
| 12 | SR-94 & Otay Lakes Rd. | FRI PM | 17.7 | C | 17.7 | C | 17.7 | C |
| | | SAT PM | 14.2 | B | 14.2 | B | 14.2 | B |

Notes:
(c) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.
(d) LOS calculations are based on the methodology outlined in the *2000 Highway Capacity Manual* and performed using Synchro 8.0
Source: Kimley-Horn and Associates, 2014

### Roadway Segment Analysis

**Table 5-8** display the roadway segments analysis for a typical weekday. All roadway segments within the study area would function at LOS D or better with the exception of Steele Canyon Road between Jamul Drive and Willow Glen Drive, which would operate at LOS E.

## TABLE 5-8
## EXISTING CONDITIONS ROADWAY SEGMENT LOS

| ROADWAY SEGMENT | ROADWAY CLASSIFICATION | LOS E CAPACITY | EXISTING CONDITIONS | | |
|---|---|---|---|---|---|
| | | | ADT | V/C RATIO | LOS |
| **Sweetwater Springs Blvd.** | | | | | |
| between Jamacha Blvd. and Austin Dr. | 4 Lane Major Road | 37,000 | 15,573 | 0.421 | B |
| **Jamacha Blvd.** | | | | | |
| between SR 94 and Sweetwater Springs Blvd. | 4 Lane Major Road | 37,000 | 17,133 | 0.463 | B |
| **Jamacha Rd. (SR 54)** | | | | | |
| between SR 94 and Fury Ln. | 6 Lane Prime Arterial | 57,000 | 42,055 | 0.738 | C |
| between Willow Glen Dr. and Brabham St. | 6 Lane Prime Arterial | 57,000 | 24,331 | 0.427 | B |
| **Steele Canyon Rd.** | | | | | |
| between SR 94 and Jamul Dr. | 2 Lane Light Collector | 16,200 | 7,009 | 0.433 | C |
| between Jamul Dr. and Willow Glen Dr. | 2 Lane Light Collector with Continuous Turn Lane | 19,000 | 14,928 | 0.786 | **E** |
| **Jamul Dr.** | | | | | |
| between Steele Canyon Rd. and Lyons Valley Rd. | 2 Lane Light Collector | 16,200 | 2,703 | 0.167 | B |
| **Willow Glen Dr.** | | | | | |
| between Jamacha Rd. and Steele Canyon Rd. | 4 Lane Major Road | 37,000 | 20,616 | 0.557 | B |
| between Steele Canyon Rd. and Hillsdale Rd. | 2 Lane Light Collector with Continuous Turn Lane | 19,000 | 12,507 | 0.658 | D |
| **Lyons Valley Rd.** | | | | | |
| between SR 94 and Jefferson Rd. | 2 Lane Light Collector | 16,200 | 5,612 | 0.346 | C |
| between Jefferson Rd. and Jamul Dr. | 2 Lane Light Collector | 16,200 | 7,638 | 0.471 | D |
| between Jamul Dr. and Myrtle St. | 2 Lane Light Collector | 16,200 | 8,853 | 0.546 | D |
| **Jefferson Rd.** | | | | | |
| between SR 94 and Lyons Valley Rd. | 2 Lane Light Collector | 16,200 | 3,225 | 0.199 | B |
| **Melody Rd. (b)** | | | | | |
| between SR 94 and Proctor Valley Rd. | 2 Lane Light Collector | 16,200 | 1,554 | 0.096 | A |
| **Proctor Valley Rd.** | | | | | |
| between Melody Rd. and Pioneer Wy. | 2 Lane Light Collector | 16,200 | 1,810 | 0.112 | A |
| **Honey Springs Rd.** | | | | | |
| between SR 94 and Mother Grundy Truck Trail | 2 Lane Light Collector | 16,200 | 1,669 | 0.103 | A |
| **Otay Lakes Rd.** | | | | | |
| between SR 94 and Otay Mountain Truck Trail | 2 Lane Light Collector | 16,200 | 4,022 | 0.248 | B |

Notes:
**Bold** values indicate roadway segments operating at LOS E or F.
(a) The v/c Ratio is calculated by dividing the ADT volume by each respective roadway segment's capacity.
(b) Under the alternative Access from Melody Road, this roadway segment from the new access road to Proctor Valley Road would have a similar LOS.
Source: Kimley-Horn and Associates, 2012.

### Peak-Hour Arterial Analysis

This analysis assumes the completion of traffic signals identified in Caltrans' SR-94 Improvement Project: SR-94 and Lyons Valley Road, SR-94 and Melody Road, and SR-94 at Daisy Drive (or alternatively Reservation Road). The installation of traffic signals at these locations would change the characteristics of the roadway operations between Proctor Valley Road and Otay Lakes Road making the HCM peak-hour two-lane highway analysis no longer applicable. With the installation of the traffic signals, this segment would operate as an arterial since traffic signals would be located within a two-mile distance from each other. **Table 5-9** presents the peak-hour arterial analysis along SR-94 between Via Mercado and Reservation Road. The roadway segment would function at LOS B or better under all peak hour conditions.

**TABLE 5-9**
**EXISTING PEAK-HOUR SR-94 ARTERIAL SEGMENT ANALYSIS**
**VIA MERCADO TO RESERVATION ROAD**

| PEAK-HOUR CONDITION | DIRECTION | SPEED (a) | LOS (b) |
|---|---|---|---|
| Weekday - AM | EB | 46.2 | A |
| | WB | 40.3 | B |
| Weekday - PM | EB | 42.5 | A |
| | WB | 40.9 | B |
| Friday PM | EB | 41.6 | B |
| | WB | 39.1 | B |
| Saturday PM | EB | 43.6 | A |
| | WB | 39.5 | B |

Notes:
(a) Speed is calculated as the roadway segment distance divided by the travel time in miles per hour (mph).
(b) The arterial LOS is based on average through-vehicle travel speed for the segment or for the entire street under consideration and is influenced both by the number of signals per mile and by the intersection control delay.
Source: Kimley-Horn and Associates, 2014

## Near-Term Conditions

This represents the traffic conditions with the addition of the traffic volumes generated by the Gaming Facility and other cumulative projects. Near-Term traffic conditions also assume the completion of intersection improvements included in Caltrans SR-94 Improvement Project. No other roadway network changes are assumed.

### Intersection Analysis

**Tables 5-10** and **5-11** presents the peak-hour LOS analysis results for the study intersections under weekday and typical Friday/Saturday conditions, respectively. Seven intersections would operate below Caltrans' LOS target.

## TABLE 5-10
## INTERSECTION LOS
## NEAR-TERM WEEKDAY PEAK HOUR CONDITIONS

| | INTERSECTIONS | PEAK HOUR | DAISY DRIVE | | ALTERNATIVE ACCESS OPTIONS | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | RESERVATION ROAD | | NEW ACCESS FROM MELODY ROAD | |
| | | | DELAY (a) | LOS (b) | DELAY (a) | LOS (b) | DELAY (a) | LOS (b) |
| 1 | SR-94 & Via Mercado | AM | 44.2 | **D** | 44.2 | **D** | 44.2 | **D** |
| | | PM | 91.7 | **F** | 91.7 | **F** | 91.7 | **F** |
| 2 | SR-94 & Jamacha Blvd. | AM | 22.1 | C | 22.1 | C | 22.1 | C |
| | | PM | 50.9 | **D** | 50.9 | **D** | 50.9 | **D** |
| 3 | SR-94 & Jamacha Rd. | AM | 35.1 | **D** | 35.1 | **D** | 35.1 | **D** |
| | | PM | 66.4 | **E** | 66.4 | **E** | 66.4 | **E** |
| 4 | SR-94 & Cougar Canyon Rd. | AM | 34.7 | C | 34.7 | C | 34.7 | C |
| | | PM | 45.6 | **D** | 45.6 | **D** | 45.6 | **D** |
| 5 | SR-94 & Steele Canyon Rd. | AM | 23.1 | C | 23.1 | C | 23.1 | C |
| | | PM | 28.6 | C | 28.6 | C | 28.6 | C |
| 6 | SR-94 & Indian Springs Dr./Lyons Valley Rd. | AM | 27.2 | C | 27.2 | C | 27.2 | C |
| | | PM | 20.4 | C | 20.4 | C | 20.4 | C |
| 7 | SR-94 & Proctor Valley Rd./Jefferson Rd. | AM | 53.2 | **D** | 53.2 | **D** | 53.2 | **D** |
| | | PM | 61.1 | **E** | 61.1 | **E** | 61.1 | **E** |
| 8 | SR-94 & Maxfield Rd. | AM | 14.7 | B | 14.7 | B | 14.7 | B |
| | | PM | 27.0 | **D** | 27.0 | **D** | 27.0 | **D** |
| 9 | SR-94 & Melody Rd./Peaceful Valley Ranch Rd. | AM | 8.9 | A | 8.9 | A | 18.1 | B |
| | | PM | 10.8 | B | 10.8 | B | 20.6 | C |
| 10 | SR-94 & Daisy Dr. or Reservation Rd. | AM | 4.8 | A | 4.8 | A | No intersection under this scenario. | |
| | | PM | 7.1 | A | 7.1 | A | | |
| 11 | SR-94 & Honey Springs Rd. | AM | 16.8 | C | 16.8 | C | 16.8 | C |
| | | PM | 17.2 | C | 17.2 | C | 17.2 | C |
| 12 | SR-94 & Otay Lakes Rd. | AM | 20.0 | C | 20.0 | C | 20.0 | C |
| | | PM | 23.8 | C | 23.8 | C | 23.8 | C |

Notes:
**Bold** values indicate intersections operating at LOS D, E or F.
(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.
(b) LOS calculations are based on the methodology outlined in the *2000 Highway Capacity Manual* and performed using Synchro 8.0
Source: Kimley-Horn and Associates, 2014

## TABLE 5-11
## INTERSECTION LOS
## NEAR-TERM FRIDAY/SATURDAY PEAK HOUR CONDITIONS

| | INTERSECTIONS | PEAK HOUR | DAISY DRIVE | | ALTERNATIVE ACCESS OPTIONS | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | RESERVATION ROAD | | NEW ACCESS FROM MELODY ROAD | |
| | | | DELAY (a) | LOS (b) | DELAY (a) | LOS (b) | DELAY (a) | LOS (b) |
| 1 | SR-94 & Via Mercado | FRI PM | 65.2 | **E** | 65.2 | **E** | 65.2 | **E** |
| | | SAT PM | 32.6 | C | 32.6 | C | 32.6 | C |
| 2 | SR-94 & Jamacha Blvd. | FRI PM | 40.3 | **D** | 40.3 | **D** | 40.3 | **D** |
| | | SAT PM | 24.0 | C | 24.0 | C | 24.0 | C |
| 3 | SR-94 & Jamacha Rd. | FRI PM | 60.4 | **E** | 60.4 | **E** | 60.4 | **E** |
| | | SAT PM | 40.1 | **D** | 40.1 | **D** | 40.1 | **D** |
| 4 | SR-94 & Cougar Canyon Rd. | FRI PM | 19.9 | B | 19.9 | B | 19.9 | B |
| | | SAT PM | 9.5 | A | 9.5 | A | 9.5 | A |
| 5 | SR-94 & Steele Canyon Rd. | FRI PM | 26.9 | C | 26.9 | C | 26.9 | C |
| | | SAT PM | 18.1 | B | 18.1 | B | 18.1 | B |
| 6 | SR-94 & Indian Springs Dr./Lyons Valley Rd. | FRI PM | 11.5 | B | 11.5 | B | 11.5 | B |
| | | SAT PM | 8.8 | A | 8.8 | A | 8.8 | A |
| 7 | SR-94 & Proctor Valley Rd./Jefferson Rd. | FRI PM | 41.9 | **D** | 41.9 | **D** | 41.9 | **D** |
| | | SAT PM | 23.7 | C | 23.7 | C | 23.7 | C |
| 8 | SR-94 & Maxfield Rd. | FRI PM | 26.2 | **D** | 26.2 | **D** | 26.2 | **D** |
| | | SAT PM | 19.2 | C | 19.2 | C | 19.2 | C |
| 9 | SR-94 & Melody Rd./Peaceful Valley Ranch Rd. | FRI PM | 8.6 | A | 8.6 | A | 19.4 | B |
| | | SAT PM | 8.3 | A | 8.3 | A | 16.2 | B |
| 10 | SR-94 & Reservation Rd. | FRI PM | 9.4 | A | 9.4 | A | No intersection under this scenario. | |
| | | SAT PM | 7.8 | A | 7.8 | A | | |
| 11 | SR-94 & Honey Springs Rd. | FRI PM | 22.8 | C | 22.8 | C | 22.8 | C |
| | | SAT PM | 16.4 | C | 16.4 | C | 16.4 | C |
| 12 | SR-94 & Otay Lakes Rd. | FRI PM | 32.5 | **D** | 32.5 | **D** | 32.5 | **D** |
| | | SAT PM | 18.2 | C | 18.2 | C | 18.2 | C |

Notes:
(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.
(b) LOS calculations are based on the methodology outlined in the *2000 Highway Capacity Manual* and performed using Synchro 8.0
Source: Kimley-Horn and Associates, 2014

In addition to the intersections along SR-94, the following County of San Diego intersections were also analyzed. All of these intersections would operate acceptably at LOS D or better under weekday and Friday/Saturday peak hour conditions with the exception of the intersection of Jamacha Boulevard and Sweetwater Springs Road, which would at LOS E under weekday PM peak-hour and at LOS F under Friday PM peak-hour conditions (Kimley-Horn and Associates, 2012).

13. Jamacha Boulevard and Sweetwater Springs Road
14. Willow Glen Drive and Jamacha Road
15. Steele Canyon Road and Willow Glen Drive
16. Steele Canyon Road and Jamul Drive
17. Lyons Valley Road and Jamul Drive
18. Jefferson Road and Lyons Valley Road
19. Melody Road and Proctor Valley Road

**Roadway Segment Analysis**

**Table 5-12** presents the roadway segments analysis under Near-Term Conditions for a typical weekday. All roadway segments within the study area would continue to function at LOS D or better, with the exception of the following roadway segments:

- Steele Canyon Road between Jamul Drive and Willow Glen Drive (LOS E); and
- Willow Glen Drive between Steele Canyon Road and Hillsdale Road (LOS E).

**TABLE 5-12**
**NEAR-TERM CONDITIONS ROADWAY SEGMENT LOS**

| ROADWAY SEGMENT | ROADWAY CLASSIFICATION | LOS E CAPACITY | EXISTING CONDITIONS | | |
|---|---|---|---|---|---|
| | | | ADT | V/C RATIO | LOS |
| **Sweetwater Springs Blvd.** | | | | | |
| between Jamacha Blvd. and Austin Dr. | 4 Lane Major Road | 37,000 | 17,939 | 0.485 | B |
| **Jamacha Blvd.** | | | | | |
| between SR 94 and Sweetwater Springs Blvd. | 4 Lane Major Road | 37,000 | 19,347 | 0.523 | B |
| **Jamacha Rd. (SR 54)** | | | | | |
| between SR 94 and Fury Ln. | 6 Lane Prime Arterial | 57,000 | 49,684 | 0.872 | D |
| between Willow Glen Dr. and Brabham St. | 6 Lane Prime Arterial | 57,000 | 26,721 | 0.469 | B |
| **Steele Canyon Rd.** | | | | | |
| between SR 94 and Jamul Dr. | 2 Lane Light Collector | 16,200 | 7,744 | 0.478 | D |

## TABLE 5-12 cont.
## NEAR-TERM CONDITIONS ROADWAY SEGMENT LOS

| ROADWAY SEGMENT | ROADWAY CLASSIFICATION | LOS E CAPACITY | EXISTING CONDITIONS | | |
|---|---|---|---|---|---|
| | | | ADT | V/C RATIO | LOS |
| between Jamul Dr. and Willow Glen Dr. | 2 Lane Light Collector with Continuous Turn Lane | 19,000 | 17,399 | 0.916 | **E** |
| **Jamul Dr.** | | | | | |
| between Steele Canyon Rd. and Lyons Valley Rd. | 2 Lane Light Collector | 16,200 | 4,683 | 0.289 | C |
| **Willow Glen Dr.** | | | | | |
| between Jamacha Rd. and Steele Canyon Rd. | 4 Lane Major Road | 37,000 | 22,029 | 0.595 | B |
| between Steele Canyon Rd. and Hillsdale Rd. | 2 Lane Light Collector with Continuous Turn Lane | 19,000 | 14,006 | 0.737 | **E** |
| **Lyons Valley Rd.** | | | | | |
| between SR 94 and Jefferson Rd. | 2 Lane Light Collector | 16,200 | 6,028 | 0.372 | C |
| between Jefferson Rd. and Jamul Dr. | 2 Lane Light Collector | 16,200 | 7,756 | 0.479 | D |
| between Jamul Dr. and Myrtle St. | 2 Lane Light Collector | 16,200 | 10,003 | 0.617 | D |
| **Jefferson Rd.** | | | | | |
| between SR 94 and Lyons Valley Rd. | 2 Lane Light Collector | 16,200 | 5,100 | 0.315 | C |
| **Melody Rd. (b)** | | | | | |
| between SR 94 and Proctor Valley Rd. | 2 Lane Light Collector | 16,200 | 2,064 | 0.127 | B |
| **Proctor Valley Rd.** | | | | | |
| between Melody Rd. and Pioneer Wy. | 2 Lane Light Collector | 16,200 | 4,068 | 0.251 | B |
| **Honey Springs Rd.** | | | | | |
| between SR 94 and Mother Grundy Truck Trail | 2 Lane Light Collector | 16,200 | 2,216 | 0.137 | B |
| **Otay Lakes Rd.** | | | | | |
| between SR 94 and Otay Mountain Truck Trail | 2 Lane Light Collector | 16,200 | 6,378 | 0.394 | C |

Notes:
**Bold** values indicate roadway segments operating at LOS E or F.
(a) The v/c Ratio is calculated by dividing the ADT volume by each respective roadway segment's capacity.
(b) Under the alternative Access from Melody Road, this roadway segment from the new access road to Proctor Valley Road would have a similar LOS.
Source: Kimley-Horn and Associates, 2012.

**Peak-Hour Arterial Analysis**

**Table 5-13** presents the peak-hour arterial analysis along SR-94 between Via Mercado and Reservation Road. The roadway segment would function at LOS C or better with the JIV Gaming Facility under all peak hour conditions.

## Horizon Year Conditions

Per the County of San Diego's Mobility Element included in the approved General Plan, two roadway segment improvements were assumed to be completed under the Horizon Year conditions. The analysis evaluates whether the Gaming Facility project's contribution to any significant impacts would be cumulatively considerable:

- Completion of Proctor Valley Road as a 2-lane light collector from Chula Vista city limits to SR-94; and
- Realignment of Otay Lakes Road with the intersection of Honey Springs Road to form a four-way intersection at SR-94.

This scenario includes a projected traffic growth based on the addition of the JIV Gaming Facility and other potential projects in the study area. Traffic conditions assume the completion of intersection and access-road improvements included in Caltrans SR-94 Improvement Project.

**Intersection Analysis**

**Tables 5-14** and **5-15** presents the peak-hour LOS analysis results for the study intersections under weekday and typical Friday/Saturday conditions, respectively. Eight intersections would operate below Caltrans' LOS target.

**TABLE 5-13**
**NEAR-TERM PEAK-HOUR SR-94 ARTERIAL SEGMENT ANALYSIS**
**VIA MERCADO TO RESERVATION ROAD**

| PEAK-HOUR CONDITION | DIRECTION | SPEED (a) | LOS (b) |
|---|---|---|---|
| Weekday - AM | EB | 44.4 | A |
| | WB | 34.1 | B |
| Weekday - PM | EB | 34.1 | B |
| | WB | 33.1 | C |
| Friday PM | EB | 37.3 | B |
| | WB | 34.1 | B |
| Saturday PM | EB | 44.5 | A |
| | WB | 38.8 | B |

Notes:
(a) Speed is calculated as the roadway segment distance divided by the travel time in miles per hour (mph).
(b) The arterial LOS is based on average through-vehicle travel speed for the segment or for the entire street under consideration and is influenced both by the number of signals per mile and by the intersection control delay.
Source: Kimley-Horn and Associates, 2014

## TABLE 5-14
## INTERSECTION LOS
## HORIZON WEEKDAY PEAK-HOUR CONDITIONS

| INTERSECTIONS | | PEAK HOUR | DAISY DRIVE | | ALTERNATIVE ACCESS OPTIONS | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | RESERVATION ROAD | | NEW ACCESS FROM MELODY ROAD | |
| | | | DELAY (a) | LOS (b) | DELAY (a) | LOS (b) | DELAY (a) | LOS (b) |
| 1 | SR-94 & Via Mercado | AM | 178.7 | **F** | 178.7 | **F** | 178.7 | **F** |
| | | PM | 312.4 | **F** | 312.4 | **F** | 312.4 | **F** |
| 2 | SR-94 & Jamacha Blvd. | AM | 56.7 | **E** | 56.7 | **E** | 56.7 | **E** |
| | | PM | 87.6 | **F** | 87.6 | **F** | 87.6 | **F** |
| 3 | SR-94 & Jamacha Rd. | AM | 60.5 | **E** | 60.5 | **E** | 60.5 | **E** |
| | | PM | 155.0 | **F** | 155.0 | **F** | 155.0 | **F** |
| 4 | SR-94 & Cougar Canyon Rd. | AM | 41.5 | **D** | 41.5 | **D** | 41.5 | **D** |
| | | PM | 43.4 | **D** | 43.4 | **D** | 43.4 | **D** |
| 5 | SR-94 & Steele Canyon Rd. | AM | 25.6 | C | 25.6 | C | 25.6 | C |
| | | PM | 31.4 | C | 31.4 | C | 31.4 | C |
| 6 | SR-94 & Indian Springs Dr./Lyons Valley Rd. | AM | 37.2 | **D** | 37.2 | **D** | 37.2 | **D** |
| | | PM | 22.3 | C | 22.3 | C | 22.3 | C |
| 7 | SR-94 & Proctor Valley Rd./Jefferson Rd. | AM | 388.9 | **F** | 388.9 | **F** | 388.9 | **F** |
| | | PM | 321.6 | **F** | 321.6 | **F** | 321.6 | **F** |
| 8 | SR-94 & Maxfield Rd. | AM | 15.0 | C | 15.0 | C | 15.0 | C |
| | | PM | 31.9 | **D** | 31.9 | **D** | 31.9 | **D** |
| 9 | SR-94 & Melody Rd./Peaceful Valley Ranch Rd. | AM | 12.8 | B | 12.8 | B | 16.1 | B |
| | | PM | 16.0 | B | 16.0 | B | 20.9 | C |
| 10 | SR-94 & Reservation Rd. | AM | 4.8 | A | 4.8 | A | No intersection under this scenario. | |
| | | PM | 7.8 | A | 7.8 | A | | |
| 11 | SR-94 & Honey Springs Rd. | As part of the San Diego County General Plan, the intersection of Honey Springs Road would be realigned to form a four-way intersection with Otay Lakes Road | | | | | | |
| 12 | SR-94 & Otay Lakes Rd. | AM | 20.1 | C | 20.1 | C | 20.1 | C |
| | | PM | 30.4 | C | 30.4 | C | 30.4 | C |

Notes:
**Bold** values indicate intersections operating at LOS D, E or F.
(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.
(b) LOS calculations are based on the methodology outlined in the *2000 Highway Capacity Manual* and performed using Synchro 8.0
Source: Kimley-Horn and Associates, 2014

## TABLE 5-15
## INTERSECTION LOS
## HORIZON FRIDAY/SATURDAY PEAK HOUR CONDITIONS

| INTERSECTIONS | | PEAK HOUR | DAISY DRIVE | | ALTERNATIVE ACCESS OPTIONS | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | RESERVATION ROAD | | NEW ACCESS FROM MELODY ROAD | |
| | | | DELAY (a) | LOS (b) | DELAY (a) | LOS (b) | DELAY (a) | LOS (b) |
| 1 | SR-94 & Via Mercado | FRI PM | 276.9 | **F** | 276.9 | **F** | 276.9 | **F** |
| | | SAT PM | 146.5 | **F** | 146.5 | **F** | 146.5 | **F** |
| 2 | SR-94 & Jamacha Blvd. | FRI PM | 85.7 | **F** | 85.7 | **F** | 85.7 | **F** |
| | | SAT PM | 43.8 | **D** | 43.8 | **D** | 43.8 | **D** |
| 3 | SR-94 & Jamacha Rd. | FRI PM | 143.4 | **F** | 143.4 | **F** | 143.4 | **F** |
| | | SAT PM | 95.2 | **F** | 95.2 | **F** | 95.2 | **F** |
| 4 | SR-94 & Cougar Canyon Rd. | FRI PM | 23.9 | C | 23.9 | C | 23.9 | C |
| | | SAT PM | 9.5 | A | 9.5 | A | 9.5 | A |
| 5 | SR-94 & Steele Canyon Rd. | FRI PM | 31.2 | C | 31.2 | C | 31.2 | C |
| | | SAT PM | 19.8 | B | 19.8 | B | 19.8 | B |
| 6 | SR-94 & Indian Springs Dr./Lyons Valley Rd. | FRI PM | 18.3 | B | 18.3 | B | 18.3 | B |
| | | SAT PM | 8.7 | A | 8.7 | A | 8.7 | A |
| 7 | SR-94 & Proctor Valley Rd./Jefferson Rd. | FRI PM | 307.0 | **F** | 307.0 | **F** | 307.0 | **F** |
| | | SAT PM | 140.5 | **F** | 140.5 | **F** | 140.5 | **F** |
| 8 | SR-94 & Maxfield Rd. | FRI PM | 33.8 | **D** | 33.8 | **D** | 33.8 | **D** |
| | | SAT PM | 20.7 | C | 20.7 | C | 20.7 | C |
| 9 | SR-94 & Melody Rd./Peaceful Valley Ranch Rd. | FRI PM | 18.2 | B | 18.2 | B | 22.2 | C |
| | | SAT PM | 12.1 | B | 12.1 | B | 30.8 | C |
| 10 | SR-94 & Daisy Dr. or Reservation Rd. | FRI PM | 11.2 | B | 11.2 | B | No intersection under this scenario. | |
| | | SAT PM | 8.3 | A | 8.3 | A | | |
| 11 | SR-94 & Honey Springs Rd. | As part of the San Diego County General Plan, the intersection of Honey Springs Road would be realigned to form a four-way intersection with Otay Lakes Road | | | | | | |
| 12 | SR-94 & Otay Lakes Rd. | FRI PM | 39.3 | **D** | 39.3 | **D** | 39.3 | **D** |
| | | SAT PM | 17.5 | B | 17.5 | B | 17.5 | B |

Notes:
(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.
(b) LOS calculations are based on the methodology outlined in the *2000 Highway Capacity Manual* and performed using Synchro 8.0
Source: Kimley-Horn and Associates, 2014

In addition to the intersections along SR-94, the following County of San Diego intersections were also analyzed under weekday and Friday/Saturday peak hour conditions (Kimley-Horn and Associates, 2012). The LOS of each intersection is summarized below.

13. Jamacha Boulevard and Sweetwater Springs Road (all LOS F)
14. Willow Glen Drive and Jamacha Road (Weekday LOS D/D, Fri/Sat LOS E/D)
15. Steele Canyon Road and Willow Glen Drive (Weekday LOS D/F, Fri/Sat LOS D/C)
16. Steele Canyon Road and Jamul Drive (Weekday LOS F/F, Fri/Sat LOS E/C)
17. Lyons Valley Road and Jamul Drive (Weekday LOS D/F, Fri/Sat LOS F/C)
18. Jefferson Road and Lyons Valley Road (Weekday LOS F/F, Fri/Sat LOS C/B)
19. Melody Road and Proctor Valley Road (Weekday LOS F/F, Fri/Sat LOS E/F)

**Roadway Segment Analysis**

**Table 5-16** presents the roadway segments analysis under Horizon Conditions for a typical weekday. All roadway segments within the study area would continue to function at LOS D or better, with the exception of the following roadway segments:

- Jamacha Road between SR-94 and Fury Lane (LOS F);
- Steele Canyon Road between Jamul Drive and Willow Glen Drive (LOS F);
- Jamul Drive between Steele Canyon Road and Lyons Valley Road (LOS E);
- Willow Glen Drive between Steele Canyon Road and Hillsdale Road (LOS E);
- Lyons Valley Road between Jefferson Road and Jamul Drive (LOS E);
- Lyons Valley Road between Jamul Drive and Myrtle Street (LOS E);
- Jefferson Road between SR-94 and Lyons Valley Road (LOS E); and
- Proctor Valley Road between Melody Road and Pioneer Way (LOS E).

## TABLE 5-16
## HORIZON CONDITIONS ROADWAY SEGMENT LOS

| ROADWAY SEGMENT | ROADWAY CLASSIFICATION | LOS E CAPACITY | EXISTING CONDITIONS | | |
|---|---|---|---|---|---|
| | | | ADT | V/C RATIO | LOS |
| **Sweetwater Springs Blvd.** | | | | | |
| between Jamacha Blvd. and Austin Dr. | 4 Lane Major Road | 37,000 | 27,000 | 0.730 | C |
| **Jamacha Blvd.** | | | | | |
| between SR 94 and Sweetwater Springs Blvd. | 4 Lane Major Road | 37,000 | 26,000 | 0.703 | C |
| **Jamacha Rd. (SR 54)** | | | | | |
| between SR 94 and Fury Ln. | 6 Lane Prime Arterial | 57,000 | 78,000 | 1.368 | **F** |
| between Willow Glen Dr. and Brabham St. | 6 Lane Prime Arterial | 57,000 | 34,000 | 0.596 | B |
| **Steele Canyon Rd.** | | | | | |
| between SR 94 and Jamul Dr. | 2 Lane Light Collector | 16,200 | 9,000 | 0.556 | D |
| between Jamul Dr. and Willow Glen Dr. | 2 Lane Light Collector with Continuous Turn Lane | 19,000 | 24,000 | 1.263 | **F** |
| **Jamul Dr.** | | | | | |
| between Steele Canyon Rd. and Lyons Valley Rd. | 2 Lane Light Collector | 16,200 | 11,000 | 0.679 | **E** |
| **Willow Glen Dr.** | | | | | |
| between Jamacha Rd. and Steele Canyon Rd. | 4 Lane Major Road | 37,000 | 26,000 | 0.703 | C |
| between Steele Canyon Rd. and Hillsdale Rd. | 2 Lane Light Collector with Continuous Turn Lane | 19,000 | 18,400 | 0.968 | **E** |
| **Lyons Valley Rd.** | | | | | |
| between SR 94 and Jefferson Rd. | 2 Lane Light Collector | 16,200 | 8,300 | 0.512 | D |
| between Jefferson Rd. and Jamul Dr. | 2 Lane Light Collector | 16,200 | 12,000 | 0.741 | **E** |
| between Jamul Dr. and Myrtle St. | 2 Lane Light Collector | 16,200 | 13,000 | 0.802 | **E** |
| **Jefferson Rd.** | | | | | |
| between SR 94 and Lyons Valley Rd. | 2 Lane Light Collector | 16,200 | 11,000 | 0.679 | **E** |
| **Melody Rd. (b)** | | | | | |
| between SR 94 and Proctor Valley Rd. | 2 Lane Light Collector | 16,200 | 5,000 | 0.309 | C |
| **Proctor Valley Rd.** | | | | | |
| between Melody Rd. and Pioneer Wy. | 2 Lane Light Collector | 16,200 | 14,000 | 0.864 | **E** |
| **Honey Springs Rd.** | | | | | |
| between SR 94 and Mother Grundy Truck Trail | 2 Lane Light Collector | 16,200 | 4,000 | 0.247 | B |
| **Otay Lakes Rd.** | | | | | |
| between SR 94 and Otay Mountain Truck Trail | 2 Lane Light Collector | 16,200 | 9,000 | 0.556 | D |

Notes:
**Bold** values indicate roadway segments operating at LOS E or F.
(a) The v/c Ratio is calculated by dividing the ADT volume by each respective roadway segment's capacity.
(b) Under the alternative Access from Melody Road, this roadway segment from the new access road to Proctor Valley Road would have a similar LOS.
Source: Kimley-Horn and Associates, 2012.

**Peak-Hour Arterial Analysis**

**Table 5-17** presents the peak-hour arterial analysis along SR-94 between Via Mercado and Reservation Road. The roadway segment would function at LOS C or better with the JIV Gaming Facility under all peak hour conditions.

**TABLE 5-17**
**HORIZON PEAK-HOUR SR-94 ARTERIAL SEGMENT ANALYSIS**
**VIA MERCADO TO RESERVATION ROAD**

| PEAK-HOUR CONDITION | DIRECTION | SPEED (a) | LOS (b) |
|---|---|---|---|
| Weekday - AM | EB | 35.0 | B |
| | WB | 20.1 | **E** |
| Weekday - PM | EB | 23.6 | **D** |
| | WB | 17.2 | **E** |
| Friday PM | EB | 24.6 | **D** |
| | WB | 17.3 | **E** |
| Saturday PM | EB | 34.7 | B |
| | WB | 22.0 | **D** |

Notes:
(a) Speed is calculated as the roadway segment distance divided by the travel time in miles per hour (mph).
(b) The arterial LOS is based on average through-vehicle travel speed for the segment or for the entire street under consideration and is influenced both by the number of signals per mile and by the intersection control delay.
Source: Kimley-Horn and Associates, 2014

### 5.2.7.2 Land Use

*Consistency with Adopted Plans*

County regulations do not apply to land development on the Jamul Reservation given that the land is held in trust by the United States for the JIV. Development of the gaming complex on the Reservation is not subject to the Jamul/Dulzura Subregional Plan, Resource Protection Ordinance, Habitat Loss Permit/Coastal Sage Scrub Ordinance, Grading and Clearing Ordinance, Biological Mitigation Ordinance, or Multiple Species Conservation Program.

The County's Subregional Plan contains mobility goals that seek to ensure a safe and efficient roadway system. The JIV is currently working with Caltrans to identify those improvements to SR-94 that would ensure safe and efficient access to and from the Jamul Reservation. The various access improvements have been designed to Caltrans standards and would, thus, provide for safe and efficient movement of people.

The Subregional Plan states that SR-94 is a scenic highway corridor as designated by the County General Plan Conservation and Open Space Element. The County's General Plan Update states that two County routes have been designated State Scenic Highways, a segment of SR 78 and SR 125. The segment of SR-94 that travels past the Reservation is a designated County Scenic Highway, but has not achieved State Designated Scenic Highway status. The County has adopted Policy COS-11.3, which states:

Require development within visually sensitive areas to minimize visual impacts and to preserve unique or special visual features, particularly in rural areas, through the following:

- Creative site planning,
- Integration of natural features into the project,
- Appropriate scale, materials, and design to complement the surrounding natural landscape,
- Minimal disturbance to topography,
- Clustering of development so as to preserve a balance of open space vistas, natural features, and community character, and
- Creation of contiguous open space networks.

If the fire station is developed on the 4-acre parcel San Diego County would allow the use by right and consider it an Essential Service under County Zoning for the Agricultural (A72) zone. Section 6905 of the County Zoning Ordinance does require staff level site plan review of a fire station located in the A72 zone. No development of the fire station would be allowed until County review is completed. Any County site plan review conditions would need to be fully implemented by the JIV as part of the County approval process.

Assuming compliance with County land use requirements, the proposed uses for the 4-acre parcel would be considered consistent with the County General Plan and Zoning Ordinance. Please see the discussion in Section 5.2.4.5 for issues related to the San Diego County MSCP Subarea Plan.

Completion of Daisy Drive would include the realignment and widening of SR-94 and improvements to the intersection of SR-94 and Melody Road. These improvements would enhance a preexisting rural roadway and transportation corridor. The conversion of existing land uses would be limited to the existing highway ROW and strips of land adjacent to the highway ROW along 0.8 to 0.9 miles of SR-94. The improvements would necessitate the acquisition of 4.74+/- acres of additional ROW along SR-94.

Lands that would be converted adjacent to the existing Caltrans ROW are part of the Metro-Lakes-Jamul segment of the San Diego County MSCP. North of the intersection of Melody Road on the east and west sides of SR-94 are lands zoned RR1 (Rural Residential). Construction of the roadway improvements would not conflict with existing land uses, disrupt or divide a community or conflict with land use designations in the vicinity of the Gaming Facility project site. The improvements involve acquiring approximately 20 to 40 feet on the east side of SR-94 and in some instances up to 50 feet on the west side of SR-94.

Additional ROW needed for the roadway improvements would follow the existing alignment of SR-94. Right-of way-needs are concentrated in the following locations; 1) near the existing Melody Road intersection, primarily on the west side of SR-94, both north and south of the intersection, 2) on the west side of SR-94 north of the Reservation (the "4-Acre Parcel"), and 3) south of the Reservation Road.

The San Diego County General Plan contains minimum parcel sizes for all property types surrounding the project site. The roadway improvements would not reduce parcel sizes on land designated "SR-1", Residential Low Density, "ER", Estate Residential, or "GA", General Agricultural below the threshold minimums.

If the access option of Daisy Drive is not selected, one of the two alternative access routes would be used. Development of either Reservation Road or the new access road from Melody Road would be similar to that described for Daisy Drive above. Development of these alternatives would also include the realignment and widening of SR-94 and improvements to the intersection of SR-94 and Melody Road. The Reservation Road alternative would require the acquisition of 4.46+/- acres of additional ROW, and the new access road from Melody Road would require 8.63+/- acres of additional ROW.

In addition, the new access road from Melody Road alternative would require additional ROW on land within Otay Mesa Specific Plan over the undeveloped 87-acre parcel between Melody Road and the Reservation. This property is zoned "SPA", Specific Plan, the size and uses having been adopted under separate action and governed by its own SPA regulations. With any change to the specific plan regulations to allow for the development of the roadway, amendment to the Otay Mesa Specific Plan would need to be submitted for approval by the San Diego County Planning Commission and County Board of Supervisors.

The new access road from Melody Road alternative would result in a new connection to Melody Road, which is classified as a collector street. The Jamul/Dulzura Subregional Plan contains Mobility Goal #1, Policy #15, which states:

> Encourage the elimination of safety hazards caused by direct access onto major arterial or collector streets. In particular, new commercial development shall have limited access to such roads…. (Jamul/Dulzura Subregional Plan, page 13)

The new access road from Melody Road alternative would connect a commercial establishment (Gaming Facility) to a collector street (Melody Road), which appears to be in contravention to the stated County policy.

### *San Diego County Regional Transportation Plan*

The Regional Transportation Plan (RTP) utilizes a set of broad goals and policy objectives that are applied to the reasonable expected revenue scenario (the expected result) to maintain the goals of the plan. Proposed improvements factored into the plan consider widespread coordination with transit agencies, including Caltrans, to anticipate future improvements. According to San Diego COG staff[7], since the Daisy Drive improvements (including those on SR-94) would be undertaken in conjunction with Caltrans and follow established protocols for Livability, Mobility, Efficiency, Accessibility, Reliability, Sustainability, and Equity, the improvements are consistent with the RTP. This conclusion would apply to the alternative access road improvements of either Reservation Road or the new access road from Melody Road, if selected.

### *SR-94 Operational Improvement Project*

Northerly improvements of the Daisy Drive improvements are located within an 18-mile segment between Melody Lane and SR-188. Improvements slated for implementation at mile 20.5 to Mile 24.4 of SR-94 include installing passing lanes, lane widening, and to some extent, the realignment of curves, where necessary. The access road improvements are similar in scope and scale to the SR-94 Operational Improvement Project, and are therefore consistent and compatible for this stretch of SR-94. This conclusion would apply to the alternative access road improvements of either Reservation Road or the new access road from Melody Road, if selected.

### *On-Reservation Land Use Effects*

Development of the JIV Gaming Facility has maintained roadway access to the western portion of the Reservation where a Tribal community center resides along with the adjacent church and cemetery. Development of the Daisy Drive improvements would improve this access, as would the alternative access road improvements of either Reservation Road or the new access road from Melody Road. There is no adopted Tribal land use plans/zoning ordinance for the Reservation.

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[7] / As provided in a telephone conversation on June 10, 2010

## 5.2.8 PUBLIC SERVICES

### 5.2.8.1 Water Supply

The Otay Water District provides water supply to the Reservation and JIV Gaming Facility. The District provides water service according to a Subarea Master Plan that was developed to plan potable and fire water service to the Gaming Facility; the plan was approved by the District in 2006. The adopted Subarea Master Plan for Potable Water Service to the Jamul Reservation (**Appendix 11**) assumed a buildout average day demand of 143 gpm and peak hour demand of 428 gpm.

Because the JIV Gaming Facility incorporates a wastewater treatment plant (WWTP) that would provide high quality reclaimed water, the use of reclaimed water would reduce the amount of potable water used. Reclaimed (or recycled) water in this document means wastewater that has been treated sufficiently to meet the California Department of Health Services' (DHS) comprehensive recycled water regulations that define treatment processes, water quality criteria, and treatment reliability requirements for public use of recycled water. These regulations are contained in Title 22, Division 4, Chapter 3, of the California Code of Regulations, commonly referred to as Title 22. Title 22 prescribes recycled water criteria and divides them into several categories based upon the extent of public access or risk of exposure. In general, Title 22 regulations are more stringent for uses with high potential for public contact and less stringent for uses with low potential for public contact.

Depending on the use, Title 22 establishes four levels of treatment required for recycled water: undisinfected secondary, undisinfected secondary-23, undisinfected secondary-2.2, and disinfected tertiary. The wastewater treatment plant would treat to the disinfected tertiary level, the highest level of treatment categorized by Title 22. This category of recycled water includes secondary effluent that has undergone tertiary treatment and has been disinfected to a level such that the median coliform bacteria in the water does not exceed a coliform bacterial density of 2.2 Most Probable Number per 100 mL. Title 22 defines the tertiary treatment process as wastewater that has been oxidized, coagulated, clarified, and filtered. The recycled water turbidity should not exceed a turbidity level of 2 nephelometric turbidity units (NTU) on average, should not exceed 5 NTU more than 5% of the time during any 24-hour period, and should never exceed 10 NTU. Approved uses of tertiary recycled water include: irrigation of food crops, parks and playgrounds, residential landscaping, pasture, and vineyards; supply for non-restricted recreational impoundments and fish hatcheries; toilet flushing; and fire suppression.

Demineralization would be required to prevent the effluent from continually degrading through each use cycle. To be re-used in the toilets/urinals and cooling towers, a portion of the effluent would be demineralized so that the blended effluent has a total dissolved solids concentration of 500 mg/L or less. The JIV Gaming Facility's recycled water intended for re-use in toilets and cooling towers would be demineralized as needed by reverse osmosis or electrodialysis reversal. A brine waste stream of 10 to 20% salinity would be disposed by trucking the reject water to the San Diego Metro Pump Station No. 1 in the City of San Diego.

Recycled water would be used for irrigation of landscape and green roofs, cooling tower, and toilet and urinal flushing within the gaming and hotel. All facilities would be double plumbed. An estimated 60% of the water used by gaming patrons would be used for toilet flushing as shown in **Table 5-18**. Water uses with potable applications would remain on potable water service. The revised, reduced water demand volumes and flow rates, assuming the use of recycled water, are presented in **Table 5-18**. By using recycled water, the total water demand volume is decreased from 86,730 gallons per day to 34,692 gallons per day and the peak hour day demand flow rate for design capacity is decreased from 181 gpm to 72 gpm. These figures fall well within the Otay District water demand assumed in the Subarea Master Plan (Otay Water District, 2010) for the Jamul Reservation, which were designed without consideration for reclaimed water.

**TABLE 5-18**
**ESTIMATED POTABLE WATER DEMANDS WITH RECLAMATION**

| COMPONENT | TOILET FLUSHING % OF TOTAL WATER DEMAND | WATER DAY DEMAND (GPD) | WATER DAY DEMAND (GPM) | MAXIMUM DAY DEMAND (GPM) | PEAK HOUR DEMAND (GPM) |
|---|---|---|---|---|---|
| Gaming Facility | 60% | 34,692 | 24 | 48 | 72 |
| SOURCE: Dexter Wilson Engineering, Inc. 2011; EDS, Inc. 2011 | | | | | |

The maximum day demand for the JIV Gaming Facility with reclamation is 48 gpm (0.07 million gallons per day). The current capacity for total reservoir storage volume for the 1296 Pressure Zone is 5.03 million gallons, according to the Otay Water District Master Plan (Otay Water District, 2010). The water demand created by the development of the JIV Gaming Facility would result in a negligible increase in demand on Pressure Zone 1296. Furthermore, the District Master Plan would increase total capacity to 10 million gallons by 2016. As well, the District Master Plan planned for the water demand of the future residential build out of two large land tracts—Village 14 and Village 16. These large land tracts would not likely be developed because they are now owned by the

California Department of Fish and Game and managed as wildlife preserves. Thus, any increases in the future water demand created by the JIV Gaming Facility are more than offset by the future increased capacity of the Pressure Zone and the removal of the planned water demands of Village 14 and Village 16. Likewise, the available maximum pumping capacity of the 1296 Pressure Zone is 3,300 gpm, and the JIV Gaming Facility would require a daily design flow of only 24 gpm (and a peak flow of 72 gpm) with reclamation. The projected ultimate maximum day demand for pressure zone 1296 is 3,017 gpm, and another pumping station is planned for Phase III of the District's Master Plan, which would increase capacity to 10,000 gpm. Thus, the 1296 Pressure Zone has more than adequate capacity to handle the water demands of the JIV Gaming Facility.

Water provided by the Otay Water District meets federal and state water quality drinking water requirements; therefore, no additional treatment is required. Preliminary analysis of the on-site water system indicates adequate water pressure is available in the existing Otay Water District water main along SR-94 to service the Gaming Facility project. Consequently, a booster station would not be necessary to increase water pressure to the JIV Gaming Facility or other customers.

According to the JIV Gaming Facility's fire protection plan, the design water demands for fire suppression are 1,500 gpm for 4 hours for the JIV Gaming Facility (National Code Consultants, 2011). This equates to 360,000 gallons for the duration of this designed fire event. The existing water supply system can handle this design volume since the 1296 Pressure Zone has about 1 million gallons of surplus reserve.

If the optional fire station is developed on the 4-acre parcel, water supply to this site would be via the same Otay Water District connection that serves the Reservation. The water demand associated with the fire station is incorporated into the overall demand presented for the Gaming Facility above.

#### 5.3.8.2 Wastewater Service

As part of the Gaming Facility project, a wastewater treatment plant is being constructed to service the facilities. This WWTP would handle only wastewater produced by the facilities developed on the Reservation and the fire station; it is not intended to service any other properties.

Wastewater generated from the facilities would flow by gravity through a series of pipes to the WWTP located on the west side of the Reservation. The wastewater would be treated to a level that meets California Title 22 recycled water quality standards. One hundred percent of wastewater flows would be treated to a level that would make it suitable for all recycled water uses and effluent disposal strategies identified for the Gaming Facility project. Wastewater would be treated using an immersed membrane

bioreactor (MBR) wastewater treatment plant. The MBR system is a state-of-the-art, advanced wastewater treatment process that utilized membrane technology, comparable to that used for production of potable water. This process was selected to achieve high quality tertiary effluent for the purposes of on-site reuse and disposal. The MBR system has been used widely throughout the country to handle flows up to five million gallons per day. The MBR process has the ability to handle high Biological Oxygen Demand and Total Suspended Solids levels typically observed in gaming wastewater. The MBR also handles variations in flow better than typical activated sludge systems. The MBR system is also approved by DHS for Title 22 applications. The MBR system is being designed for nitrification/denitrification in order to reduce the level of nitrates in the effluent. Additionally, the effluent would be disinfected by ultraviolet (UV) light. By selecting UV disinfection, the concern over disinfection byproducts entering the groundwater is eliminated. Typical MBR effluent quality has the following concentrations: Biochemical Oxygen Demand < 1 mg/L, Total Suspended Solids = 0 mg/L, Ammonia < 0.2 mg/L, Nitrate = 8 mg/L, Total Coliform < 2.2 MPN/100mL, and Turbidity < 0.1 NTU.

MBR systems are known for high rates of organics removal and can be further designed to target nutrients, including nitrogen and phosphorus. Compared with other wastewater treatment plant designs, the MBR system is more reliable and consistent in producing high quality effluent. The only treatment design that is more advanced is a reverse osmosis system. Reverse osmosis systems are designed for potable water systems and are generally cost-prohibitive.

Biosolids produced by the wastewater treatment plant would be dewatered and stored within the wastewater treatment plant site. After dewatering, the dewatered biosolids would be trucked off-site regularly for disposal at the Otay or Sycamore Sanitary Landfills. The frequency of this operation would depend on the solids wasting frequency in the WWTP. All biosolids dewatering and storage facilities would be contained and the foul air scrubbed to minimize odors.

**Table 5-19** lists the projected average, daily and peak wastewater flows for the JIV Gaming Facility. The use of recycled water would not affect the design flow for the treatment and collection system. However, wastewater disposal requirements would be reduced since a portion would be diverted to the reclamation system. Breaking the water balance numbers down on a per monthly basis, **Table 5-20** shows that the maximum disposal requirement would be 37,419 gpd in January. There would be no need for disposal June-October.

The recycled water system would include a recycled water storage tank, and the recycled water transmission and distribution pipelines. The facilities are being built with

a dual plumbing system—one for potable water and one for recycled water. Recycled water would be produced by the wastewater treatment plant at the rate that wastewater is received at the plant. The recycled water storage tank would contain, at a minimum, sufficient recycled water at all times to meet the gaming complex's toilet flushing requirements. This storage tank would be located adjacent to, or underneath the WWTP, and the minimum storage capacity would be 200,000 gallons. Recycled water would be used for irrigation of landscape and green roofs, and for evaporation water supply in cooling towers.

As mentioned above under **Section 5.2.1.2** Soils/Geology, and as shown in **Table 5-20**, excess treated water would need to be disposed during the months of November through May. The monthly treated water surplus estimates show that a maximum of 37,419 gpd during the month of January is the worst-case month for excess water during the year (Wastewater Addendum, May 2015). The disposal site is capable of accommodating up to 18,700 gpd while providing 100 percent redundancy. Excess water beyond the 18,000 gpd disposed of on-site, which would occur during the months of November to February, would be trucked to San Diego Metro Pump Station No. 1 Receiving Station located on East Harbor Drive in the City of San Diego.

**TABLE 5-19**
**WASTEWATER FLOW ESTIMATES**

| ITEM | ESTIMATES |
|---|---|
| Gaming Facility Avg Daily Flow (gpd) | 58,100 |
| Gaming Facility Max Daily Flow (gpd) | 88,350 |
| Gaming Facility Peak Daily Flow (gpd) | 118,600 |
| SOURCE: Wastewater Addendum, May 2015; EDS, 2015 | |

**TABLE 5-20**
**MONTHLY TREATED WATER SURPLUS**

| MONTH | DAILY SURPLUS (gpd) |
|---|---|
| January | 37,419 |
| February | 27,143 |
| March | 16,452 |
| April | 10,333 |
| May | 323 |

**TABLE 5-20 cont.**
**MONTHLY TREATED WATER SURPLUS**

| MONTH | DAILY SURPLUS (gpd) |
|---|---|
| June | 0 |
| July | 0 |
| August | 0 |
| September | 0 |
| October | 0 |
| November | 23,000 |
| December | 33,548 |
| SOURCE: Wastewater Addendum, May 2015; EDS, 2015 | |

If the optional fire station is developed on the 4-acre parcel, wastewater would be treated by the WWTP on the Reservation. The wastewater treatment associated with the fire station is incorporated into the overall volume estimates presented for the Gaming Facility above.

### 5.3.8.3 Solid Waste Service

Waste generation resulting from operation of the Gaming Facility is estimated to be 5.43 tons per day (**Table 5-21**). The gaming complex would employ a 30 cubic yard compactor to reduce the volume of trash being produced. To reduce the volume of trash even further, a streamline compactor would be used to reduce the water content of the trash.

Waste sludge and solids residuals (biosolids) generated from operation of the WWTP would be dewatered on-site by means of a belt filter press and ultimately hauled off site for disposal. Both the Otay and Sycamore Sanitary Landfills accept biosolids. The frequency of this operation would depend on the solids wasting frequency in the wastewater plant. Solids wasting at the treatment plant would likely vary between 5,000-10,000 gallons per month at 1.5% solids, resulting in a minimal increase to the regional disposal of solid waste approximately once a month.

**TABLE 5-21**
**SOLID WASTE DISPOSAL ESTIMATE**

| EMPLOYMENT CATEGORY | JOBS | CIWMB Business Type | RATE (Tons/employee/year) | Tons/year | Tons/day |
|---|---|---|---|---|---|
| Gaming | 964 | 38[a] | 0.9 | 868 | 2.38 |
| Food and Beverage | 130 | 29[b] | 3.1 | 402 | 1.10 |
| Entertainment | 61 | 33[c] | 1.7 | 103 | 0.28 |
| Gift Shop | 46 | 33 | 1.7 | 78 | 0.21 |
| Admin. | 69 | 33 | 1.7 | 117 | 0.32 |
| Marketing | 61 | 33 | 1.7 | 103 | 0.28 |
| Maintenance | 76 | 33 | 1.7 | 129 | 0.35 |
| Security | 205 | 38 | 0.9 | 184 | 0.51 |
| | 1,611 | | Total Waste Disposal: | 1,984 | 5.43 |

Notes:
[a] Includes SIC code 79 Amusement and Recreation Services
[b] Includes SIC code 58 Eating and Drinking Places
[c] Includes SIC code 73 Business Services
SOURCE: CIWMB, 2011; EDS, 2015

The Jones Disposal Company (a subsidiary of Waste Management, Inc.) currently provides solid waste service to the Reservation. The JIV would enter into a contract with the company to extend service to the gaming complex. The waste would be shipped to a transfer station in El Cajon, where recyclable materials are removed, thus reducing the amount of waste sent to either the Otay Landfill or the Sycamore Sanitary Landfill. The Otay Landfill, located in the City of Chula Vista, has a permitted maximum disposal of 5,830 tons per day and had a remaining capacity of 24,514,904 cubic yards in 2012 (CalRecycle, 2015). The Sycamore Sanitary Landfill, located in the City of San Diego, has a permitted maximum disposal of 3,800 tons per day and had a remaining capacity of 42,246,551 cubic yards in 2011 (CalRecycle, 2015).

The JIV Gaming Facility is expected to generate 5.43 tons per day which represents 0.09% of the Otay Landfill permitted daily intake. This estimated daily tonnage represents 0.14% of the Sycamore Landfill permitted daily intake. The estimated solid waste generation by the Gaming Facility would utilize approximately 0.06% of the combined permitted maximum disposal of 9,630 tons per day between the two landfills. The Gaming Facility's projected solid waste generation is considered an insignificant contribution to the waste stream and is not expected to significantly decrease the life expectancy of either landfill. San Diego County, in consultation with the California Integrated Waste Management Board, regulates landfills through the issuance of permits to ensure that environmental effects to groundwater, soil, and air are minimized. Thus, construction and operation of the JIV Gaming Facility would have a less-than-significant impact upon regional solid waste disposal services.

Litter generated at the Gaming Facility project would be handled appropriately through disposal at the aforementioned facilities. Landscaping and maintenance staff would pick up any litter that is dropped on site. Decorative trash and recycling receptacles would be placed strategically throughout the gaming complex to encourage patrons not to litter. The constant presence of roving security guards would also help prevent littering at the gaming complex. The Caltrans Adopt a Highway Program found that all adoptable stretches of SR-94 around Jamul (from the junction of 94 and 54 south past Daley Ranch) have been adopted and are being maintained free of garbage.

#### 5.3.8.4 Electricity, Natural Gas and Telecommunications

Construction of Daisy Drive or the alternative access roads has the potential to disrupt or damage existing utilities within the construction area. To avoid potential construction-related conflicts with underground utilities, Underground Service Alert (USA) provides a free "Dig Alert" service to all excavators (contractors, homeowners and others), in Southern California. The excavator's call to USA would automatically notify all USA Members (utility service providers) who may have underground facilities at their work site. In response, the USA Members would mark or stake the horizontal path of their underground facilities, provide information about, or give clearance to dig. This simple safety service protects the excavator from personal injury and underground facilities from being damaged.

The utility companies would be responsible for the timely removal or protection of any existing utility facilities located within construction areas. The Joint Utilities Coordination Committee has developed procedures to assist cities, counties and utilities in coordinating public improvement projects to alleviate scheduling and construction conflicts.

Past versions of larger gaming facilities proposed by the JIV were estimated to potentially have a peak demand load of 6.6 megawatts. This is a worst case number when applied to the current Gaming Facility, but is used as a conservative estimate for purposes of this analysis. This number was an estimate based on National Electricity Code (NEC) calculations, which generally overestimate project demands to assure adequate power is supplied. The facilities are being built in compliance with the NEC and all State and County amendments, including the California State Building Code Title 24 regulations for energy-saving design.

The Gaming Facility project site is currently served by one SDG&E circuit via a 12-kilovolt aerial cable along SR-94. This circuit, which serves the Jamul area, is rated to carry approximately 10 megawatts. To provide service for operation of the Gaming Facility, SDG&E is currently installing a new underground 12-kilovolt feeder circuit from

the Jamacha Substation to the Reservation. The new circuit would be installed within the Caltrans right-of-way of SR-94. From the Caltrans ROW, the new circuit would be installed underground within the Reservation Road corridor to the Gaming Facility.

Two emergency generators would be provided to assure full capacity service to the JIV Gaming Facility in the event of a loss of service from the SDG&E grid. The generators would be rated at two megawatts each and would be located west of the Gaming Facility. Use of the generators would be restricted to emergency purposes only. There would be a one-day supply of diesel fuel on-site. However, with refueling, longer periods of grid power failure would not disrupt the operation of the JIV Gaming Facility. Diesel fuel for the generators would be stored in two 3,850-gallon tanks. There would also be a liquid propane tank located along with the diesel fuel tanks to provide propane to the kitchen facility. The tanks would be located above ground and would be double-walled to provide for leak-detection and containment. Additionally, the tanks would have a pre-cast concrete encasement to further protect against the possibility of a leak.

When analyzed on a regional level, the JIV Gaming Facility does not constitute a significant increase in power demand. According to the California Energy Commission, California's electricity generation system generates more than 296,000 gigawatt hours each year (California Energy Commission, 2011). San Diego County's current generating capacity is 5,438 megawatts from 68 generation facilities, ranging from nuclear to wind turbine. The JIV Gaming Facility's peak demand load of 6.6 megawatts represents only 0.12% of the County's current generating capacity.

The Tribal Government would provide telecommunication facilities to service the facilities. The Jamul Tribal Government would coordinate with the chosen service providers for additional utilities and/or upgrades of existing utilities. As described above, propane would be used instead of natural gas for the kitchen facilities. The JIV Gaming Facility would not affect area natural gas facilities or supply.

#### 5.3.8.5 Law Enforcement

Operation of the JIV Gaming Facility would result in additional calls for law enforcement services to local law enforcement agencies. The increased demand for public safety services is typical of commercial development. Consistent with Section 8.0 of the Tribal-State Compact, the JIV is committed to providing on-site security for gaming operations to reduce and prevent criminal and civil incidents. Impacts would be lessened due to the 24-hour per day presence of Tribal security and monitoring of the casino by video surveillance, which would aid in the deterrence of criminal activity at the Gaming Facility. Under Public Law 280, the State of California and other local law enforcement agencies have enforcement authority over criminal activities on Tribal land. The JIV may enter

into a service agreement with the San Diego County Sheriff's Department to address criminal issues. The Sheriff's Department does not have authority over civil matters on Tribal lands.

Based on information provided by the California Highway patrol (CHP), the increase in traffic along SR-94 may increase service demands on the El Cajon Office. The CHP is obligated to provide traffic control assistance, handle disabled vehicles, and to enforce traffic regulations along SR-94, which is a special duty line beat. The SR-94 in the area of the Gaming Facility project site is considered to be a low priority area, based on service requirements in other more populated areas of the County. Potential effects to patrol demands are based upon the ability of roadways to safely handle traffic. The JIV would complete roadway upgrades identified in the SR-94 Improvement Project, and the JIV would make fair-share contributions to other traffic improvements in order to improve traffic flow and safety on SR-94.

#### 5.3.8.6 Fire Protection and Emergency Medical Services

Operation of the facilities would occur in an area that is surrounded by grasslands and is highly susceptible to grassfires. The use of electrical or mechanical equipment could result in a structure or grass fire. The facilities were designed and constructed to comply with the following codes:

Building Codes:

- 2013 California Building Code
- 2012 International Building Code

Fire Codes:

- 2013 California Fire Code (CFC)
- County of San Diego 2011 Consolidated Fire Code

Mechanical Codes:

- 2013 California Mechanical Code (CMC)
- 2012 Uniform Mechanical Code (UMC)

Plumbing Codes:

- 2013 California Plumbing Code (CPC)
- 2012 Uniform Plumbing Code (UPC)

Electrical Codes:

- 2013 California Electrical Code (CEC)
- 2011 National Electrical Code (NEC)

Energy Codes:

2010 California Building Energy Efficiency Standards

2013 California Green Building Standards Code

National Fire Protection Association Codes and Standards (NFPA):

NFPA 13, Automatic Fire Sprinkler Systems

NFPA 10. Potable Fire Extinguishers

NFPA 14, Standpipe Systems

NFPA 20, Centrifugal Fire Pumps

NFPA 72, National Fire Alarm Standard

NFPA 110, Emergency and Standby Power Systems

The JIV has agreed via a compact with the State to meet the California codes, including the NFPA codes adopted by the State. All enclosed structures would be fitted with features identified in **Appendix 13** of this document.

The automatic fire sprinkler systems, using quick response sprinkler heads where appropriate, would limit fire size and control or extinguish fires with little need for fire fighter intercession. Smoke detectors would be installed in mechanical and electrical rooms, and normally unoccupied spaces. They would not be installed in public areas. Activation of sprinklers provides adequate alarm for these spaces. This fire sprinkler and smoke detector approach meets or exceeds current code requirements.

The facilities have been constructed to meet adequate fire flow requirements. A fire flow of at least 1,500 gallons per minute (after applying sprinkler credits) would be provided by the Otay Water District. In addition, adequate water would be available for firefighting by providing an on-site water storage tank, pump system, and emergency backup system near the wastewater treatment facility, thereby meeting the requirements of the CFC, UFC, and the California Building Code. Standpipe outlets would be provided in the parking garage.

In addition to the features identified above, the JIV would form an on-site Reservation Fire Department, or enter into a service agreement with San Diego Rural Fire Protection District (SDRFPD) as detailed in **Section 3.4.1** of the SEIS.

If developed, the Jamul Tribal Fire Department would enter into a Mutual Aid Agreement with various local agencies including San Miguel Consolidated Fire Protection District, SDRFD, the US Department of Forestry, Cal-Fire, and shared resources for Emergency Dispatch Center the Heartland Communication Facility Authority (HCFA), El Cajon, CA and Emergency Medical Responses. The JIV would contract directly with American

Medical Services (AMR) for Advanced Life Support (ALS) ambulance services. Subject to the Director of Public Safety Authorities Having Jurisdiction (AHJ) review, the ALS would be staffed with an on-site paramedic and Emergency Medical Technician. Detailed fire protection and life safety features of the on-site facilities are identified in Appendix 13 of the Tribal EE. Participation in any mutual or automatic aid agreements is subject to negotiation between the JIV and those agencies. The mutual aid would provide for an adequate first response to all Reservation alarms with a system of redundancy for augmentation of initial responses when necessary.

The implementation of the program identified above by the JIV would result in a net beneficial impact to the surrounding community. The compliance with applicable codes and standards such as the fire codes and NFPA standards (implemented with the program above) would assure that adequate, qualified fire protection services are provided for the Reservation. The adoption of mutual aid agreements with other neighboring fire districts would provide additional fire protection to the surrounding community, while at the same time assuring that qualified backup is available if an incident were to occur at the Reservation.

Public concern has been expressed regarding future traffic congestion and the potential effect of this congestion on the ability of the SDRFPD to maintain adequate response times. Emergency calls to the SDRFPD are dispatched via Code 3 Response, which involves the use of lights and sirens, which alerts motorist to divert to the right side of the roadway to allow emergency vehicles to utilize the center of the roadway. To provide for the necessary emergency vehicles access clearances, vehicles need a minimum of eight (8) feet to pull over and away from the main line of traffic flow. One common example utilizing a forty (40)-foot of highway ROW (pavement plus shoulder), would ensure the safe passage of emergency vehicles with the capability for motorists to safely pull over on each side of the roadway, in this example 24 feet of emergency vehicle access width would be available. Since SR-94 is never less than 40 feet through its entire corridor, ample width for the safe passage for emergency vehicles is readily available. Additionally, the new traffic signals installed at Melody/SR-94 and the entrance of Daisy Drive or alternative reservation access road would provide additional control features via the emergency vehicle's opti-com devices, which utilize a strobe light to control and override the traffic signals, which would improve response times for the SDRFD.

### 5.2.9 OTHER VALUES

#### 5.2.9.1 Noise

Noise criteria used in this study include the Federal Highway Administration (FHWA) Noise Abatement Criteria for the assessment of noise consequences related to surface

traffic. In addition, environmental consequences are also evaluated relative to the change in ambient noise conditions at existing noise-sensitive uses in the project vicinity which would result from the project.

*Federal Noise Abatement Criteria*

FHWA establishes Noise Abatement Criteria (NAC) for various land uses which have been categorized based upon activity. Land uses are categorized on the basis of their sensitivity to noise, as indicated in **Table 5-22**.

**TABLE 5-22**
**FHWA NOISE ABATEMENT CRITERIA**

| Activity Category | Leq(h) | Evaluation Location | Activity Description |
|---|---|---|---|
| A | 57 | Exterior | Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose. |
| B* | 67 | Exterior | Residential |
| C* | 67 | Exterior | Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings |
| D | 52 | Interior | Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios |
| E* | 72 | Exterior | Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F. |
| F | - | - | Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing |
| G | - | - | Undeveloped lands that are not permitted |

* Includes undeveloped lands permitted for this activity category
Source: FHWA, 2011.

### *Local Standards*

The San Diego County Noise Ordinance (San Diego County Code of Regulatory Ordinances. Title 3. Division 6. Chapter 4. Section 36.401) provides General Sound Level Limits according to land use. These standards apply to non-construction noise sources. Land surrounding the project site is zoned A72 (Agriculture) and S88 (Specific Plan), which both allow for residential uses. The exterior noise level limits specified by the noise ordinance for low-density residential land uses are 50 dBA Leq from 7 a.m. to 10 p.m., and 45 dBA Leq from 10 p.m. to 7 a.m. This standard applies at the property line of the property on which the noise is produced or at any location on a property that is receiving the noise.

Construction noise, with the exception of emergency work, is limited by the County Noise Ordinance to not exceed an average sound level of 75 decibels for an eight-hour period, between 7 a.m. and 7 p.m. This standard applies to the boundary line of the property where the noise source is located or on any occupied property where the noise is being received.

According to San Diego County Code, except for emergency work or work on a public road project, a significant impact results if a person produces or causes to be produced an impulsive noise that exceeds the maximum sound level shown in **Table 5-23**, when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is received, for 25 percent of the minutes in the measurement period. The maximum sound level depends on the use being made of the occupied property.

**TABLE 5-23**
**MAXIMUM SOUND LEVEL (IMPULSIVE) PERMITTED AS MEASURED AT OCCUPIED PROPERTY**

| OCCUPIED PROPERTY USE | DECIBELS (dBA) |
|---|---|
| Residential, Village Zoning, or Civic Use | 82 |
| Agriculture, Commercial, or Industrial Use | 85 |
| SOURCE: San Diego County, 2009; Ldn Consulting, 2011;EDS, 2015 | |

Based on the County General Plan, exterior noise and land use-compatibility levels are established at 60 dBA CNEL for single family, 65 dBA CNEL for multifamily and an interior noise level of 45 dBA CNEL for all residential, with exceptions as identified in the County General Plan Noise Element (County 2011). Noise sensitive land uses include, but are not limited to, residences, schools, hospitals, and libraries. Additionally, a 10

dBA CNEL increase is considered a substantial increase over existing conditions (County 2011).

In contrast to noise, vibration is not a common environmental problem. Some common sources of vibration are trains, buses on rough roads, and construction activities such as blasting, pile driving, and heavy earth-moving equipment.

Like noise, vibration from a single source may consist of a range of frequencies. The magnitude of vibration is commonly expressed as the peak particle velocity (PPV) in the unit of inches per second (in/sec). The PPV is the maximum velocity experienced by any point in a structure during a vibration event and indicates the magnitude of energy transmitted through vibration. PPV is an indicator often used in determining potential damage to buildings from vibration associated with blasting and other construction activities. **Table 5-24** summarizes the typical effects of vibration on people and buildings based on a review of published vibration levels and effects (Caltrans, 2013).

**TABLE 5-24**
**VIBRATION EFFECTS ON BUILDINGS AND HUMANS**

| Effects | Peak Particle Velocity (in/sec) | |
|---|---|---|
| | Transient Sources [1] | Continuous/Frequent Intermittent Sources [2] |
| **Potentially Damaged Structure Type** | | |
| Extremely fragile historic buildings, ruins, ancient monuments | 0.12 | 0.08 |
| Fragile buildings | 0.2 | 0.1 |
| Historic and some old buildings | 0.5 | 0.25 |
| Older residential structures | 0.5 | 0.3 |
| New residential structures | 1.0 | 0.5 |
| Modern industrial/commercial buildings | 2.0 | 0.5 |
| **Human Responses** | | |
| Barely perceptible | 0.04 | 0.01 |
| Distinctly perceptible | 0.25 | 0.04 |
| Strongly perceptible | 0.9 | 0.10 |
| Severe | 2.0 | 0.4 |

Notes:
1 Transient sources create a single isolated vibration event, such as blasting and drop balls.
2 Continuous/frequent intermittent sources include impact pile drivers, vibratory pile drivers, and vibratory compaction equipment.
Source: Caltrans, 2013

### *Construction Noise*

Construction of the Gaming Facility is nearing completion. No noise or vibration complaints have been received to date, including during initial excavation and blasting. Development of Daisy Drive and if developed, the fire station would result in typical construction-related noise. **Table 5-25** lists noise levels produced by typical construction machinery.

Construction noise levels are rarely steady in nature, but instead fluctuate depending on the number and type of equipment in use at any given time. There would be times when no large equipment is operating and noise would be at or near ambient levels. Ambient noise levels in the project vicinity are primarily determined by traffic on SR-94. As described in **Section 4.10**, hourly average ambient noise levels near the project site were recorded in the range of 56 to 65 dBA. In addition, construction-related sound levels experienced by a noise sensitive receptor in the vicinity of the project site would be a function of distance.

Construction activities would include the various pieces of construction equipment identified in **Table 5-25**. The nearest occupied structure to the project site is the San Diego Rural Fire Protection District station on the east side of SR-94 at 14024 Peaceful Valley Ranch Road. The fire station is located approximately 230 feet north of the proposed construction, and has a direct line of sight from the construction site. The intervening terrain is sparsely vegetated and provides a mix of acoustically hard and soft site conditions. To be conservative this assessment uses hard site conditions, which attenuate noise at about 6 dB(A) per doubling of distance. In addition, the fire station is currently influenced by continuous noise generated from SR-94. At this distance, based on simultaneous use of a three pieces of equipment, e.g. 2 dozers and a loader, the maximum hourly construction noise level would be approximately 85 dBA $L_{eq}$ at 50 feet. Based on a distance of 230 feet from the center of construction, construction noise would attenuate to 72 dBA $L_{eq}(8)$ or less at the property line of the fire station. Noise levels of this magnitude would not exceed the County's noise level limit for construction activities.

**TABLE 5-25**
**NOISE LEVELS OF TYPICAL CONSTRUCTION EQUIPMENT**

| EQUIPMENT | NOISE LEVEL AT 50 FEET | TYPICAL DUTY CYCLE |
|---|---|---|
| Auger Drill Rig | 85 | 20% |
| Backhoe | 80 | 40% |
| Compactor (ground) | 80 | 20% |
| Compressor (air) | 80 | 40% |
| Concrete Mixer Truck | 85 | 40% |

**TABLE 5-25 cont.**
**NOISE LEVELS OF TYPICAL CONSTRUCTION EQUIPMENT**

| EQUIPMENT | NOISE LEVEL AT 50 FEET | TYPICAL DUTY CYCLE |
|---|---|---|
| Concrete Pump | 82 | 20% |
| Concrete Saw | 90 | 20% |
| Crane (mobile or stationary) | 85 | 20% |
| Dozer | 85 | 40% |
| Dump Truck | 84 | 40% |
| Excavator | 85 | 40% |
| Front End Loader | 80 | 40% |
| Generator (25 KVA or less) | 70 | 50% |
| Generator (more than 25 KVA) | 82 | 50% |
| Grader | 85 | 40% |
| Hydra Break Ram | 90 | 10% |
| Insitu Soil Sampling Rig | 84 | 20% |
| Jackhammer | 85 | 20% |
| Paver | 85 | 50% |
| Pneumatic Tools | 85 | 50% |
| Pumps | 77 | 50% |
| Rock Drill | 85 | 20% |
| Rock Crusher | 95 | 50% |
| Scraper | 85 | 40% |
| Tractor | 84 | 40% |

KVA = kilovolt amps
Source: FHWA, 2008

### *Construction Vibration*

Blasting was required for excavation of the Gaming Facility foundation. All blasting was completed in accordance with a blasting plan identified in the Tribal EE. No adverse effects of blasting were reported. Development of Daisy Drive and if developed, the fire station, would result in typical construction-related vibration. **Table 5-26** shows vibration levels from typical construction equipment.

**TABLE 5-26**
**VIBRATION LEVELS OF TYPICAL CONSTRUCTION EQUIPMENT**

| Activity | Peak Vibration Levels (In/Sec PPV) at 25 ft. |
|---|---|
| Vibratory roller | 0.210 |
| Large bulldozer | 0.089 |
| Loaded truck | 0.076 |

Source: Caltrans, 2013.

The nearest off-site receptor is the fire station located approximately 230 feet north of the Daisy Drive project site. At a distance of 200 feet, the vibration from a vibratory roller would be attenuated to a PPV of approximately 0.026 in/sec[8], with most other equipment generating less vibration. These vibration levels may be perceptible at the fire station, but would not have the potential to damage buildings.

### *Operational Traffic Noise*

The dominant noise generated by the operation of the JIV Gaming Facility would be from traffic; the Gaming Facility would contribute to an increase in local traffic volumes, resulting in higher noise levels along local roadways. Noise levels along SR-94 were predicted using the FHWA Traffic Noise Model (TNM). The results of the noise modeling for the existing and horizon year (2035) condition are presented in **Table 5-27**. As shown, changes in noise levels associated with projected increases in traffic levels on SR-94 by the year 2035 are expected to be 5 dBA Leq or less. Changes in noise levels of this order would be barely perceptible to the average human ear.

**TABLE 5-27**
**MODELED TRAFFIC NOISE CONDITIONS**

| RECEIVER LOCATION | NEAREST MAJOR INTERSECTION | LAND USE | EXISTING dBA Leq | 2035 dBA Leq | CHANGE dBA Leq |
|---|---|---|---|---|---|
| 11330 Campo Rd, La Mesa | SR-94 and Jamacha Blvd. | Skyline Wesleyan Church | 62 | 64 | 2 |
| 2987 Jamacha Rd, El Cajon | SR-94 and Jamacha Road | Rancho San Diego Town Center – Retail/Restaurant | 53 | 58 | 5 |
| 12856 Campo Rd, Spring Valley | SR-94 and Steele Canyon Road | Residential | 55 | 58 | 3 |
| 12918 Campo Rd, Jamul | SR-94 and Steele Canyon Road | 7-Eleven Retail | 66 | 69 | 3 |
| 13801 Campo Rd, – Jamul | SR-94 and Indian Springs Drive | Taproot Montessori Preschool | 56 | 60 | 4 |
| 13925 Campo Rd, Jamul | SR-94 and Maxfield Road | Residential | 47 | 52 | 5 |
| 14013 Las Palmas Rd, Jamul | SR-94 and Melody Road | Residential | 56 | 57 | 1 |
| 14024 Peaceful Valley Ranch Rd, Jamul | SR-94 and Melody Road | Fire Station | 58 | 61 | 3 |
| Source: Caltrans, 2015 | | | | | |

[8] PPV = 0.210 (25/200)[1] Based on a attenuation rate of 1 due to the potential presence of competent bedrock in the vicinity.

### *On Site Mechanical Equipment*

Mechanical equipment may be a primary noise source associated with the JIV Gaming Facility. The equipment would be mounted on the rooftop of the gaming complex within a mechanical room, as well as in the basement of the parking garage in the case of the wastewater treatment plant. Potential noise sources include fans, pumps, compressors, chillers, and cooling towers. Noise levels from this equipment vary substantially depending on unit efficiency, size, and location, but generally range from 45 to 70 dBA Leq at a distance of 50 feet (EPA 1971). Accounting for typical attenuation rates of 6 dB per doubling of distance, noise levels attributed to unshielded mechanical systems could reach 55 Leq at the nearest property line which may exceed the nighttime noise level limit as identified in the Section 36.404 of the County Code. However, the Gaming Facility would incorporate acoustical louvers capable of achieving a 10 dBA reduction, to ensure noise levels do not exceed the nighttime noise level limit.

### *Emergency Electrical Generators*

Emergency generators may be used to supply necessary power requirements to vital systems within facilities. Emergency generators are typically operated under two conditions: loss of main electrical supply or preventive maintenance/testing. The operation of mechanical equipment associated with emergency operations is exempt from the noise standards outlined in the San Diego County Code; thus, this analysis focuses on routine preventive maintenance and testing operations, which are conducted on a periodic basis.

Reference noise-levels of generators are approximately 75 to 82 dBA at 7 meters (23 feet) (Kohler Power Generation 2008) Based on these reference noise levels, unshielded emergency electrical generators operating for 60 minutes under full load, could exceed the County's noise ordinance for daytime stationary-source noise if located within 800 feet of noise sensitive land uses. In addition, unshielded generators located within 1,650 feet of noise-sensitive land uses could exceed the significance criteria for nighttime stationary-source noise. Maintenance for generators typically only requires 15 minutes or less of operating time per month. Therefore, the average hourly noise level for generator maintenance would be approximately 68 dBA $L_{eq}$ at 50 feet. Additionally, the emergency generator would be west of the parking garage in an equipment room, which would attenuate noise levels by approximately 20-30 dBA.

### *Emergency Facilities*

The JIV Gaming Facility may include emergency facilities, i.e., a fire station that could generate high noise levels from alarms and vehicle movements when station crews

respond to emergency situations. The noise levels associated with the operation of emergency activities are infrequent and exempt from the County Noise Ordinance.

*Parking Lot Activities*

Activities making up a single parking event include vehicle arrival, limited idling, occupants exiting the vehicle, door closures, conversations among passengers, occupants entering the vehicle, startup, and departure of the vehicle. A representative parking lot with 200 stalls and 400 parking events per hour would produce a noise level that exceeds the significance criteria for the daytime at distances up to 200 feet and exceeds the nighttime noise standard at distances up to 350 feet. No noise sensitive residential land uses would be within 570 feet of parking areas.

*Loading Dock and Delivery Activity*

Noise sources associated with loading dock and delivery activities can include trucks idling, onsite truck circulation, trailer-mounted refrigeration units, pallets dropping, and the operation of forklifts. Noise monitoring at loading docks previously undertaken indicates that typical hourly average noise levels range from 55 to 60 dBA Leq and from 80 to 84 dBA Lmax at a distance of 50 feet. Based on these previously measured noise levels, the significance criteria would be exceeded at approximately 160 feet from the acoustic center of the loading dock and the nighttime stationary noise criterion would be exceeded approximately 280 feet from the acoustic center of the loading dock. No noise sensitive land uses would be within 280 feet of loading docks.

### 5.2.9.2 Hazardous Materials

*Accidental Release of Hazardous Materials - Construction*

During the period of construction of the fire station (if developed) and Daisy Drive or the alternative access roads, various petroleum products and hazardous materials would be stored and used in the project area. **Table 5-28** provides a list of construction materials that may be used and activities that may be performed that have the potential to contribute pollutants, other than sediment, directly to the ground or to storm water runoff.

Under CWA Section 402, any construction project that disturbs at least one acre of land requires enrollment in the construction general permitting program under the NPDES. For construction on Indian Reservations and federal lands, the landowner and contractor must enroll for coverage under the U.S. EPA's General Storm Water Discharge Permit for Construction Activities (NPDES No. CAR10000IF). For construction on non-federal lands in California, the landowner and contractor must enroll for coverage under the State Water Resources Control Board's General Storm Water Discharge Permit for

Construction Activities (Order No. 2009-0009, NPDES No. CAS000002) prior to the initiation of construction. Coverage under either permit requires creation and implementation of an effective storm water pollution prevention plan, erosion control plan, hazardous materials management and spill response plan, and construction best management practices, all of which are designed to minimize or eliminate accidental discharges of pollutants. These plans would reduce or eliminate the potential for accidental release of pollutants during construction, as well as properly control stormwater on the construction site. Stormwater Pollution Prevention Plans have been completed and filed for work on the Reservation and the 4-acre parcel.

**TABLE 5-28**
**SUMMARY OF POTENTIAL POLLUTANTS OTHER THAN SEDIMENT**

| CONSTRUCTION ACTIVITY/MATERIAL TYPE | POTENTIAL POLLUTANT |
|---|---|
| Vehicle lubricants and fuels, including oil, grease, diesel and gasoline, and coolants | Petroleum hydrocarbons, volatile organic compounds (VOCs) |
| Asphaltic emulsions associated with asphalt-concrete paving operations | Petroleum hydrocarbons, VOCs |
| Portland cement, masonry, and concrete products, muriatic acid, etc. | Materials with a low or high pH, materials with high alkalinity, metals |
| Base and subbase material | Materials with high alkalinity / pH, metals |
| Adhesives, paints, solvents, etc. | VOCs, SVOCs, metals |
| Landscaping materials and wastes | Pesticides, biological oxygen demand, metals |
| Treated lumber (materials and waste) | Arsenic, copper, other metals, creosote |
| Building material packaging and construction personnel | General litter (municipal solid waste, universal waste) |
| Portable toilets | Septic waste (fecal coliform, biological oxygen demand) |
| SOURCE: Natural Investigations, 2013 | |

### *Buried Hazards or Hazardous Materials - Construction*

No evidence of buried storage tanks or soil or groundwater contamination or other recognized environmental conditions were found during environmental site assessments performed in the last decade. To date, no buried tanks for contaminated soils or groundwater have been found during construction. All tanks located at the former gas pump at the fire station have been properly removed. Therefore, no buried hazards are expected to exist within the construction area.

### *Accidental Release of Hazardous Materials - Operation*

Operation of the JIV Gaming Facility would involve the use, storage, and disposal of some hazardous materials and petroleum products, which include the following:

- Emergency generators would provide back-up electrical service to the JIV Gaming Facility in the event of a loss of service from the SDG&E grid. Diesel fuel for the generators would be stored in two 3,850-gallon tanks. The tanks would be located above ground and would be double-walled to provide for leak-detection and containment. Additionally, the tanks would have a pre-cast concrete encasement to further protect against the possibility of a leak;
- A liquid propane tank would be located near the diesel fuel tanks to provide propane to the kitchen facility;
- A small emergency generator would provide back-up electrical service to the fire station (if developed). A small diesel tank would be used to power the generator; and
- Herbicides, pesticides, paints, and strong cleansers would be used as part of building and grounds maintenance.

Under state and federal laws that are jointly enforced under the Unified Program administered by the California Environmental Protection Agency, businesses and commercial and industrial operations are carefully monitored. Among the requirements for legal operation of a business or enterprise that is involved with reportable quantities of petroleum products or hazardous materials are the following:

- creation and implementation of a Hazardous Materials Business Plan, which includes a spill prevention, containment, and countermeasures plan;
- current inventory and site map of all reportable quantities of petroleum products or hazardous materials;
- annual inspections of the facility by the Certified Unified Program Agency and/or local fire department;
- employee training; and
- proper recordkeeping of purchases, disposal, and manifesting of hazardous materials and wastes.

If a business generates hazardous wastes above threshold volumes, the business must register as a Hazardous Waste Generator with the U.S. EPA and/or the California Environmental Protection Agency, depending upon the jurisdiction. Registration involves regular inspections as well as the implementation of requirements for storage, labeling,

contingency planning, training, shipping, reporting, and disposal of hazardous materials. The JIV would comply with these existing regulatory and monitoring mechanisms.

*Risk of Causing Wildfire During Construction*

Wildfires are a potential hazard in rural San Diego County. Areas adjacent to the project area are covered in fuel-rich vegetation, such as grasses, leaf litter, resinous shrubs, and trees. The Gaming Facility project area is located within an area of moderate to high fire hazard. Construction activities may introduce potential ignition sources that have the potential to initiate a wildfire, which could cause injury or death of people or property losses. Implementation of typical best management practices adopted by the JIV would reduce fire hazards.

### 5.2.9.3 Visual Resources

The JIV Gaming Facility is located in a setting of hilly terrain of semi-arid scrub, stone outcrops, and tree-lined drainages. The primary viewpoint of the project site is along SR-94 with additional viewpoints from the fire station located across SR-94 and distant residences in the surrounding hills.

Completion of Daisy Drive would include the realignment and widening of SR-94 and improvements to the intersection of SR-94 and Melody Road. The improvements would result in a wider expanse of pavement associated with wider lanes, added turn lanes, and the new access driveway. Minor alterations to the bends and curves of the road would also occur. Retaining walls, traffic signals located at intersections, and street lights would be located along stretches of improved roadway. All of the retaining walls are proposed to be between three and eight feet tall. The height of the walls is low relative to the surroundings, and they would run parallel to the roadway, rather than at right angles; thus conforming with lines of the roadway as a unified part of the improvements, making them less visible. Placement of the walls (as well as their height) would help to ensure they do not block the visibility of any natural features. Overall, the viewshed would remain an area of transition, primarily consisting of open grazed land surrounded by rocky hillsides, dotted with manmade features, fences, creeks, and scattered buildings.

Daisy Drive would be a divided roadway with an entrance ramp elevated over an exit ramp. The ramps would raise the roadway from the grade of SR-94 to the separate entrance and exit levels of the Gaming Facility. Based on engineering plans, up to 15 feet of fill would be added to accomplish the elevation change. Retaining walls would be constructed to contain the fill. The retaining walls would have a height of 10 to 17 feet. From the top of the fill ramp, the final 50 to 120 feet of entrance ramp would be an elevated bridge over the exit ramp. The access ramps would be constructed along a rising hillside located directly to the east of the roadway, thereby reducing the apparent

grade alteration from SR-94, and providing visual integration with the surrounding landscape. The most substantial retaining wall would be along the western edge of Daisy Drive and views of this feature by southbound travelers on SR-94 would be obscured by existing trees and planned landscaping.

If the access option of Daisy Drive is not selected, one of the two alternative access routes would be used. Improvements to Reservation Road or the development of a new access road from Melody Road would also include the realignment and widening of SR-94 and improvements to the intersection of SR-94 and Melody Road. These access options would introduce similar features as described for Daisy Drive. However, if the option of a new access road from Melody Road is developed, there would be an increased potential for glare and light associated with the new intersection and driveway as no roadway currently exists in that location.

If the fire station is developed on the 4-acre parcel, it would occur in the same location formerly occupied by the San Diego Rural Fire Protection District. This building would be of scale and character consistent with the surrounding rural residential and open space area, and would not introduce a substantial visual element in the viewshed.

### 5.2.10 GROWTH-INDUCING EFFECTS

A growth inducing effect is an effect that fosters economic or population growth, or the construction of additional housing, either directly or indirectly. Direct growth would result, for example, if a project involved the construction of new housing. Indirect growth inducement could result if a project established substantial new permanent employment opportunities, which in turn induced housing growth or other additional service, office or other growth. Growth inducing effects could also result if the project would remove obstacles to population growth (e.g., expansion of a waste water treatment plant that could allow more construction in the service area).

The JIV Gaming Facility would result in an estimated 1,611 permanent jobs (**Table 5-29**). For purposes of this analysis, 100 percent of the total permanent jobs are assumed to be new jobs – jobs created in the economy rather than lateral shifts from one job to another without labor force replacement. Thus, the total *new* permanent jobs that would be created are therefore estimated to be 1,611 at full buildout of the gaming complex.

**TABLE 5-29**
**DIRECT, INDIRECT AND INDUCED JOB CREATION**

| JOBS | JAMUL GAMING FACILITY |
|---|---|
| Operation | |
| Direct Operation Jobs | 1,611 |
| Indirect and Induced Operation Jobs | 806 |
| Total | 2,417 |
| SOURCE: Proforma Advisors LLC, 2012 | |

This analysis assumes that the workforce demands of 1,611 new permanent jobs resulting from the JIV Gaming Facility would be met within the geographical area of the San Diego-Carlsbad-San Marcos MSA due to the close proximity of populated areas within this area to the Reservation, and the existing estimated civilian unemployment rate of 5.1% (79,200) unemployed individuals) within this MSA (EDD, 2015). Given existing unemployment and the number of new jobs created by the JIV Gaming Facility, the existing labor force within the MSA would also be expected to fill the vast majority of any indirect and induced employment growth. As a result, it is assumed that the majority of new employees for the JIV Gaming Facility would continue to reside at their existing residences within the MSA.

While it is expected that a small percentage of new employees would choose to buy a home or relocate closer to their place of employment, the increased housing demand is expected to be met by vacant housing units available in the region, primarily in the East and South Suburban residential areas where 11,718 vacant units are estimated to be available (SANDAG, 2015). Looking forward, SANDAG has estimated that the East and South Suburban Areas would experience a cumulative growth of 21,303 housing units by 2020 (SANDAG, 2013). While the overall demand for housing could increase as a result of the Gaming Facility project, the demand is not expected to create the need for construction of new housing and would likely be filled by the existing housing stock.

The creation of temporary and permanent jobs is expected to result in increased demand for goods and services, which may result in commercial growth within San Diego County. Examples of goods and services include fresh produce, wholesale goods, marketing, and maintenance products and services. Commercial growth would also occur as the result of new employee wages, which would be used to provide the workers with housing, clothes, food, health care, and a range of other goods and services. Visitors who are attracted to the region as a result of the facilities could be expected to spend money on food, transportation, accommodation and entertainment elsewhere in the region. For example, casino patrons may also stop at a local shopping

center or service station. Demand for goods and services is expected to be most significant in the South Suburban areas where the majority of employees are expected to reside.

The employees of the JIV Gaming Facility would constitute only a small portion of total growth in population expected for the South Suburban area. Additionally, commercial growth within the South Suburban areas and other areas of San Diego County are to occur over a wide geographic area, supporting existing businesses as well as new businesses. The vast majority of increased commercial demand generated by the JIV Gaming Facility is expected to be absorbed by existing businesses and enterprises. These existing commercial areas have existing infrastructure such as water and wastewater service. Moreover, any new commercial development within San Diego County would be subject to approval pursuant to County land use plans and ordinances. Therefore, the JIV Gaming Facility is not likely to induce "disorderly" commercial growth within San Diego County, either directly or indirectly.

## 5.2.11 CUMULATIVE EFFECTS

This section extends the analysis of the No Action Alternative to consider effects beyond those solely attributable to the implementation of the Gaming Facility. Cumulative effects is defined as the effects on the environment that result from the incremental effect of the proposed action when added to other past, present, and reasonably foreseeable future actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.

### 5.2.11.1 Cumulative Setting

The cumulative analysis begins with: 1) identifying past, present, and future actions and projects in association with the status of the resources, ecosystems, and human communities that may be affected, and 2) defining geographic borders and time frame of the analysis for each environmental topic addressed.

The following cumulative development projects have been identified in consultation with San Diego County.

1. *Tentative Parcel Map (TPM) 20550 (Morgan Minor Subdivision)* proposes to construct 2 single-family estate homes. The project site is proposed north of the Proctor Valley Road/Poplar Meadow Lane intersection.

2. *TM 5154 RPL1 (Hendrix Subdivision)* is located east of Campo Road on Las Palmas Road. The project proposes to develop 5 single-family estate homes.

3. *TM 5213 RPL2 (Mintz Subdivision)* is located north of Skyline Truck Trail and east of Hidden Trail drive. The project proposes to develop approximately 25 acres of land into 10 single-family estate homes.

4. *TM 5289 RPL2 (Jamul Highlands Subdivision)* proposes to construct 25 single-family estate homes. The project site is proposed south of the Valley Road/Jamul Highlands Road intersection.

5. *TPM 20626* proposes to construct 3 single-family estate homes. The project site is proposed on the west side of Proctor Valley Road, just north of the Proctor Valley Road/Melody Road intersection.

6. *TPM 20628 RPLI (Yacoo Minor Subdivision)* proposes to construct 4 single-family estate homes. The project site is proposed on Schlee Canyon Road north of Proctor Valley Road.

7. A Residential Development is located just east of the Reservation and south of Olive Vista Drive. The project proposes to develop 20 single-family estate homes.

8. *TPM 20599 RPLI (Blanco Parcel Map)* proposes to construct 4 single-family estate homes. The project site is proposed on the east side of SR-94, north of the Melody Road.

9. *TPM 20868 (Stein Barth Minor Subdivision)* is located just north of the Reservation and south of Olive Vista Drive. The project proposes to develop 2 single-family estate homes.

10. *TPM 20594 (Pioneer Minor Subdivision)* is located just west of the Reservation and north of Melody Lane. The project proposes to develop 3 single-family estate homes.

11. *Otay Ranch -Village 19* is located south west of the Reservation and south of Melody Lane. The project proposes to develop 20 single-family estate homes.

12. *Jamul Estates II* is located just north east of the Reservation. The maximum allowable developable lots are 68 single-family estate homes based on the current zoning.

13. *Simpson Farms* is generally located on the northeast corner of the SR-94 (Campo Road)/Jefferson Road intersection in the Jamul Community of San Diego County. The project proposes to develop 98 single-family estate homes and 115,000 square feet (sf) of commercial uses.

14. *Peaceful Valley Ranch* project proposes the subdivision of 181.31 acres for an estate residential development, equestrian uses and amenities, and fire service facilities. The project is located east of SR-94 and would use the intersection of SR-94 and Melody Road as a single access point.

The cumulative analysis assumes the completion of two projects identified in the Mobility Element of the San Diego County General Plan: completion of Proctor Valley Road as a 2-lane light collector from Chula Vista city limits to SR-94, and realignment of Otay Lakes Road with the intersection of Honey Springs Road to form a four-way intersection at SR-94.

In addition to these specific projects, the cumulative analysis takes into account growth anticipated in the San Diego County General Plan (2011 update). The traffic analysis also uses the Regional Transportation Forecast Models developed by the San Diego Association of Governments (SANDAG).

The geographic boundaries of the cumulative effects zone have been determined by the nature of the resources affected and the distance that effects may travel. As an example, increased sedimentation of waterways that result from a project are limited to the watershed in which they occur. As a result, it is only necessary to examine incremental effects within that watershed. Air quality emissions from a project, however, travel over far greater distances and therefore necessitate analysis on a county, air basin, or regional level. For this analysis, the geographic boundaries of the cumulative effects zone is generally that of San Diego County, although with many resources (water, biological etc.) smaller natural or cultural boundaries are used.

The time frame of the cumulative effects analysis extends to 2035, which is the time frame of SANDAG's Series 12 Regional Model. Beyond 2035, information on growth patterns and future activities becomes scarce and uncertainties increase, limiting the usefulness of such analysis.

As recommended by CEQ *Considering Cumulative Effects*, not all potential cumulative effects issues have been included, only those that are considered to be relevant or consequential have been discussed in depth (CEQ, 1997:12).

### 5.2.11.1 Environmental Consequences

#### *Land Resources*

The geographic boundaries of the cumulative effects zone for land resources is the Gaming Facility area due to the fact that effects would occur to (and not from) the

proposed development areas and/or are specific to on-site conditions related to seismic ground acceleration and liquefaction, as well as landslide/slope stability and expansive soils. Cumulative development in the Jamul/Dulzura community would include land and roadway development necessary to accommodate the County's planned growth for this area. The most visible changes to topography would come from clearing and flattening of land to accommodate subdivision development. However, only limited grading would be associated with development of the fire station (if developed) and Daisy Drive or alternative access road. Soil loss associated with the fire station and roadway improvements would be minimized through incorporation and implementation of the Erosion Control Plan. The construction of the fire station and roadway improvements would not contribute to a cumulative increase of seismic hazards in the area. All features of the roadway improvements would be constructed to Caltrans standards. No significant mineral resources are known to exist in the project area. The No Action Alternative, which consists of Gaming Facility management by the JIV, would not significantly contribute to a cumulative land resources impact.

### *Water Resources*

The geographic boundaries of the cumulative effects zone for water resources is defined as the drainage basin boundaries identified for the Gaming Facility. Stormwater discharges from residential and roadway areas are a concern in managing water quality. Cumulative growth in the Jamul/Dulzura community would result in increased impervious surfaces, which would increase potential sedimentation, pollution and stormwater flows in the area waterways. Cumulative development within the Jamul/Dulzura community could result in cumulatively considerable effects if off-site flows from future development result in overload of the stormwater facilities leading to adverse impacts to downstream water resources. However, cumulative development would be required to comply with County requirements for storm water detention/retention, which are similar to those measures incorporated into the Gaming Facility. Compliance with County requirements would reduce adjacent cumulative development potential adverse impacts on the water facilities from off-site flows.

The amount of increased impervious surfaces due to on-site Gaming Facility development would be limited to that area necessary to accommodate Daisy Drive and the optional fire station. Daisy Drive would incorporate on-site detention/retention facilities and sediment filtering devices to ensure that cumulative contribution to off-site water resource effects are minimized. Similar measures would be taken with the fire station, if developed. The No Action Alternative, which consists of Gaming Facility management by the JIV, would not significantly contribute to a cumulative water resources impact.

### *Air Quality*

The geographic boundaries of the cumulative effects zone for air quality is defined as the San Diego Air Basin (SDAB), which is coincident with the boundaries of San Diego County. Past cumulative air pollutant emissions have resulted in a significant cumulative greenhouse gas impact. Moving forward, the cumulative emissions associated with the cumulative project list in this section would also contribute to this significant impact. The State's goal is to reduce these emissions back to the 1990 level, or an approximate 28% reduction from current levels.

The JIV Gaming Facility's contribution to this impact is estimated to be 10,516 metric tons of $CO_{2e}$ per year. To address this, the Gaming Facility has incorporated solar and energy efficiency measures, which would assist in the attainment of the State's goal of achieving an overall 28% greenhouse gas reduction. Operation of the JIV Gaming Facility would add area source and mobile emissions, as discussed in **Section 5.2.3** Air Quality. However, the level of emissions created would not exceed significance screening thresholds. CO emissions due to additional mobile source emissions would not generate conditions that would require an operational hotspot CO concentration analysis. The operational activities of the JIV Gaming Facility would conform to applicable thresholds, would not create a CO hotspot, and would not result in a cumulatively considerable net increase of criteria pollutants. The No Action Alternative, which consists of Gaming Facility management by the JIV, would not significantly contribute to a cumulative air quality impact.

### *Biological Resources*

The geographic boundaries of the cumulative effects zone for biological resources is defined as the Jamul/Dulzura community. When other projects are considered, continuing development increases urbanization, which can result in additional loss of natural communities in the region. Cumulative projects that are in the vicinity of Willow Creek would have the potential to add cumulatively to the wildlife corridor impact. Land south of the JIV Tribal Lands is not expected to see future development given that it is included in the RJER (west of SR-94) and HCWA (east of SR-94) owned and operated by CDFW. This land south of the JIV Tribal Lands also contains a General Plan land use designation of Open Space Conservation, which would confirm its future open space/conservation status. The four-acre parcel is designated Semi-Rural Residential; however, the future use is expected to remain an access road parcel for the JIV Tribal Lands.

Other developments could occur on vacant Semi-Rural Residential designated land that exists on the west side of SR-94 north of Melody Road, which encompasses the Willow Creek riparian corridor, but no approved or pending developments have been identified. The 87-acre parcel to the south between Melody Road and the JIV Tribal Lands is classified as Hardline Preserve, Pre-Approved Mitigation, and Take-Authorized Areas. No developments exist on the 87-acre parcel, and no approved or pending developments have been identified with the exception of proposed Alternative 3 of the Proposed Project.

South of Melody Road/Peaceful Valley Ranch Road on the east side of SR-94, future land uses could consist of residential/equestrian uses in the Peaceful Valley Ranch development recently approved by San Diego County. As of now, the only new development consists of an improved Peaceful Valley Ranch Road and a fire station for the Rural Fire Protection District. Being on the east side of SR-94, future development in this area, including the Peaceful Valley Ranch development, would not contribute to the Willow Creek wildlife corridor impacts of Alternative 3 of the Proposed Project.

Development of Daisy Drive or alternative access road would result in the loss of open space and natural habitats. Thus, development of the Gaming Facility project area would contribute incrementally to the regional loss of open space and natural habitats. However, the natural habitats affected are in a degraded condition and are not known to support special-status species. Additionally, these losses would be offset by the purchase of compensatory habitat that is of higher quality. The roadway improvements would not block migratory routes or wildlife corridors, nurseries, or fisheries. Additionally, the roadway improvements would not conflict with policies or adopted habitat conservation plans. The County MSCP is designed to compensate for cumulative loss of open space and natural habitat by the creation and expansion of nature preserves. Impacts to the County MSCP are addressed in **Section 5.2.4**. The No Action Alternative, which consists of Gaming Facility management by the JIV, would not significantly contribute to a cumulative biological resources impact.

### *Cultural Resources*

The geographic boundaries of the cumulative effects zone for cultural resources is defined as the Jamul/Dulzura community. Significant cultural resources are non-renewable. The disturbance or alteration of a cultural resource causes an irreversible loss of significant information. Cumulative development in the County of San Diego and the Jamul/Dulzura Subregion may contribute to the destruction or modification of significant cultural resources. Mitigation is required for all development in San Diego County to comply with County policies, CEQA, and/or Section 106 of the NHPA. Adherence to all applicable regulations would ensure that potential impacts to cultural

resources are considered and mitigated. The Gaming Facility improvements would avoid known resources and would not directly adversely affect known significant cultural resources or directly contribute to a cumulative loss of known significant cultural resources. The No Action Alternative, which consists of Gaming Facility management by the JIV, would not significantly contribute to a cumulative cultural resource impact.

### *Socioeconomic Conditions*

The geographic boundary of the cumulative effects zone for socioeconomic conditions is defined as San Diego County. The Gaming Facility would result in the creation of jobs and increased sales tax revenue that would beneficially impact San Diego County. Potential social costs associated with gambling (including economic hardship and increased dependence on social services) would be avoided by the implementation of Problem Gaming Measures (**Section 3.4**). No significant adverse cumulative socioeconomic effects are anticipated. The No Action Alternative, which consists of Gaming Facility management by the JIV, would not significantly contribute to a cumulative socioeconomic impact.

### *Resource Use Patterns*

#### Transportation

The transportation analysis for Near-Term and Horizon Year conditions is presented in **Section 5.2.7.1** *Transportation/Circulation*.

#### Land Use

The geographic boundary of the cumulative land use analysis is defined as the Jamul/Dulzura Subregional Plan area. It should be noted that the Jamul/Dulzura Subregional Plan does not apply to the Reservation; however, it is used because potential land use effects would occur primarily within this area due to the location of the Reservation. While growth and development would occur in other areas of the San Diego County, the JIV Gaming Facility is expected to result in negligible land use effects beyond the Jamul/Dulzura community.

The San Diego County General Plan and Jamul/Dulzura Community Plan guide land uses within the unincorporated portion of the county where the Reservation is located. San Diego County estimates that growth in the Jamul/Dulzura area would increase from approximately 10,159 people in 2009 to 16,000 people at buildout. Growth is managed within this portion of the county by implementation of Goal 1 of the Jamul/Dulzura Community Plan, which states that “Development of the land in such a manner as to retain the rural densities and land uses of the community.”

Cumulative land use effects that may occur in the Jamul/Dulzura community as a result of expected growth and development include the following:

- Conflicts with existing land uses, and
- Disruption of access to existing or planned land uses.

The anticipated future growth in the Jamul/Dulzura community outside the Reservation boundaries would be subject to the policies of the General Plan and Jamul/Dulzura Community Plan, which both were the result of public processes to determine the pattern of land use that would facilitate implementation of both plans. Enforcement of stated goals and policies through review and approval of land use development plans, ensures orderly development within the County. The stated goal above is expected to minimize land use conflicts as growth occurs within this area over the next 20+ years. The No Action Alternative, which consists of Gaming Facility management by the JIV, would not significantly contribute to a cumulative land use impact.

### *Public Services*

Although urban growth rates have slowed nationwide due to the economic recession, San Diego County remains one of the most rapidly growing regions in the Unites States. San Diego County has responded by regulating development, promoting smart growth, and by expanding public service infrastructure to meet projected demands. In 2004, the SANDAG adopted the Regional Comprehensive Plan to provide a blueprint for managing the region's growth while preserving natural resources and limiting urban sprawl.

### Water Supply

The San Diego County Water Authority and the City of San Diego, along with other urban water suppliers, are required by the state to prepare urban water management plans and update them every five years. The Water Authority's 2010 Urban Water Management Plan identifies a diverse mix of water resources as goals to be implemented through 2030 to ensure long-term water supply reliability for the region.

Based on the Otay Water District's Master Plan, the existing emergency water reserves are deficient; the current capacity for total reservoir storage volume is 3.04 million gallons, and 3.5 million gallons is required for projected growth. However, the Otay Water District would address these deficiencies by building two additional reservoirs: a 2 million gallon reservoir that is in design / construction and a 10 million gallon reservoir to be added by 2016. Note that the Master Plan's ultimate storage requirements were designed for the residential build-out of Village 14 and Village 16, which are large tracts of land near the Reservation that have been purchased by the California Department of

Fish and Game and deed-restricted as wildlife preserves. Therefore, the projected ultimate consumption values are conservative due to the planned usages being decreased by open-space designations.

The JIV Gaming Facility has implemented mitigation by design by incorporating water-saving and water recycling measures into the Gaming Facility design. The water demand created by the development of the JIV Gaming Facility results in an increased demand on Pressure Zone 1296 of 2%. However, this increase and future water demand created by the JIV Gaming Facility would be fully offset by the future increased capacity of the Pressure Zone and the removal of the planned water demands of Village 14 and Village 16. The available flow of the 1296 Pressure Zone is 1,164 gpm, and the JIV Gaming Facility would require a daily design flow of 40 gallons per minute (and a peak flow of 57 gallons per minute) with water recycling measures implemented. Thus, the 1296 Pressure Zone has more than adequate capacity to handle the water demands of the JIV Gaming Facility. The No Action Alternative, which consists of Gaming Facility management by the JIV, would not significantly contribute to a cumulative water supply impact.

## Wastewater Service

The City of San Diego's Metropolitan Wastewater System treats the wastewater from the City and 15 other cities and districts (including the Otay Water District's service area) from a 450-square-mile area with a population of over 2.2 million (City of San Diego 2007). In the 1990s, the City constructed the two water reclamation plants, the biosolids treatment facility, and several pump stations, and made major upgrades to the Point Loma Plant. These facilities provide a treatment system capacity sufficient to meet the projected needs of the 450-square-mile service area through at least 2020 (City of San Diego, 2007).

The Reservation is not within a wastewater treatment service district. As part of the Gaming Facility project, a wastewater treatment plant would be constructed to service the project facilities. Wastewater flow would be treated to a level that would make it suitable for all recycled water uses and effluent disposal strategies identified for the Gaming Facility project. Wastewater would be treated using an immersed MBR wastewater treatment plant. Because all of the wastewater that is generated by the Gaming Facility would be collected, treated, and reused or properly disposed, there would be no increase in demand for regional wastewater services. The No Action Alternative, which consists of Gaming Facility management by the JIV, would not significantly contribute to a cumulative wastewater service impact.

## Solid Waste Service

The management of solid waste in San Diego County is mandated by state law and guided by policies at the state and local levels. The California Integrated Waste Management Act requires that all local jurisdictions, cities, and counties divert 50 percent of the total waste stream from landfill disposal. Unincorporated San Diego County, which includes Jamul, diverted 54% of its solid waste in 2006 (California Integrated Waste Management Board, 2011). Each local jurisdiction must demonstrate compliance by instituting source reduction programs. The County of San Diego Integrated Waste Management Plan includes a Countywide Siting Element, which demonstrates a remaining disposal capacity of at least 15 years to serve all of the jurisdictions within the County.

Waste generation resulting from operation of the JIV Gaming Facility's facilities was estimated to be approximately 6 tons per day, and the Gaming Facility would employ a 30 cubic yard compactor to reduce the volume of trash being produced. To reduce the volume of trash even further, a streamline compactor would be used to reduce the water content of the trash. The waste generated from the Gaming Facility project would be shipped to a transfer station in El Cajon, where recyclable materials are removed, thus reducing the amount of waste sent to either the Otay Landfill or the Sycamore Sanitary Landfill. Solid waste generation resulting from the Gaming Facility project would represent only 0.06% of the landfills' combined daily permitted intake. The No Action Alternative, which consists of Gaming Facility management by the JIV, would not significantly contribute to a cumulative solid waste impact.

## Electricity, Natural Gas, and Telecommunications

The Regional Energy Strategy 2030 prepared by the Regional Energy Office of SANDAG was produced to develop a vision for how energy would be produced and consumed in the region. This strategy developed policies and provided measurable targets to achieve the region's sustainable energy vision. The California Public Utilities Commission has the exclusive power and sole authority to regulate privately-owned or investor-owned public utilities such as SDG&E, the energy provider in the Jamul region. This exclusive power allows for the planned growth of utilities to serve expanding service areas and customers. SDG&E exceeded the state-required 20% Renewable Portfolio Standard in 2010.

Based on an electrical load analysis performed for the JIV Gaming Facility, it was estimated that the JIV Gaming Facility would have a peak demand load of 6.6 megawatts. When analyzed on a regional level (which is appropriate because electricity is produced and distributed on a regional basis), the JIV Gaming Facility would not likely

constitute a significant increase in power demand. According to the California Energy Commission (2011), California's electricity generation system generates more than 296,000 gigawatt hours each year, and San Diego County's current generating capacity is 5,438 megawatts from 68 generation facilities, ranging from nuclear to wind turbine. The JIV Gaming Facility's peak demand load represents 0.1% of the County's current generating capacity. The facility also includes the use of solar energy and low energy utilities to reduce electrical use.

AT&T provides telecommunications services to the area. The Jamul Tribal Government would fund and coordinate with the chosen service providers for additional utilities and/or upgrades of existing utilities. Propane would be used instead of natural gas for the kitchen facilities. The JIV Gaming Facility would not affect area natural gas facilities or supply. The No Action Alternative, which consists of Gaming Facility management by the JIV, would not significantly contribute to a cumulative electricity, natural gas, and telecommunications impact.

### Law Enforcement

The San Diego County Sheriff's Department provides general law enforcement and jail functions in a service area of approximately 4,200 square miles, including the Jamul area. In addition, the Sheriff's Department provides specialized regional services to the entire county, whether they are needed in incorporated cities within the county or in the unincorporated areas not serviced by a city law enforcement agency. Operation of the gaming facilities under the JIV Gaming Facility may increase demands on the San Diego County Sheriff's Department.

The JIV would provide continuous, on-site security for casino operations to reduce and prevent criminal and civil incidents. The JIV may enter into a service agreement with the San Diego County Sheriff's Department to address criminal issues on the federal reservation.

The California Highway Patrol is the chief law enforcement agency for traffic related issues on public highways and roads leading up to the Reservation. The El Cajon Station serves an extensive region of southern San Diego County. Based on information provided by the CHP, the increase in traffic along SR-94 due to operation of the JIV Gaming Facility could increase service demands on the El Cajon Office. Potential effects to patrol demands are based upon the ability of roadways to safely handle traffic. As noted in the transportation discussion in **Section 5.2.7.1**, the JIV would implement upgrades of the SR-94 Improvement Project as well as other fair-share contributions to traffic improvements in order to mitigate effects to SR-94. These measures would assist in reducing congestion and operation effects. The No Action Alternative, which

consists of Gaming Facility management by the JIV, would not significantly contribute to a cumulative law enforcement impact.

Fire Protection and Emergency Medical Services

The CDF, under contract to the BIA, provides wildland fire protection and responds to all wildfires. The San Diego Rural Fire Protection District covers 720 square miles in the southeastern portion of San Diego County. The majority of responses are for medical emergencies. The new Jamul Fire Station, located directly across SR-94 from the Reservation would allow for very quick emergency response times ranging from one to five minutes. The Reservation currently receives emergency medical services from the San Diego Rural Fire Protection District. The Rural Fire Protection District is not obligated to service the Reservation, but currently responds to medical emergencies as a courtesy to the Jamul Tribal Government.

Operation of the casino complex would introduce ignition sources and increase the risk of both structure fires and wildfires. The use of the Gaming Facility by patrons and employees would result in an increased demand for emergency medical services. However, the JIV Gaming Facility has been designed to comply with fire building codes, and the JIV Gaming Facility includes the construction and operation of a fire station and ambulatory services, or the JIV would contract for these services. The compliance with applicable codes and standards would assure that adequate, qualified fire protection services are provided for the Reservation and surrounding community. The No Action Alternative, which consists of Gaming Facility management by the JIV, would not significantly contribute to a cumulative fire protection and emergency medical services impact.

### *Noise*

Cumulative noise impacts would be associated with traffic noise. The analysis provided in **Section 5.2.9.1**, addresses traffic noise increases for the horizon year (2035) cumulative conditions.

### *Hazardous Materials*

The geographic boundary of the cumulative effects zone for hazardous materials is defined as the Gaming Facility project area due to the fact that effects would be site-specific. There are no existing hazardous materials on the Gaming Facility project site. The Gaming Facility project would not use significant quantities of hazardous materials. Therefore, there are no significant cumulative hazardous materials issues associated with the JIV Gaming Facility. The No Action Alternative, which consists of Gaming

Facility management by the JIV, would not significantly contribute to a cumulative hazardous materials impact.

### *Visual Resources*

The geographic boundary of the cumulative effects zone for visual resources is defined as the Gaming Facility area and surrounding viewshed because changes in visual resources would be most noticeable in the vicinity of the Gaming Facility as geographic barriers typically prevent a visual resources effect from being perceived over large distances. The transformation of the Jamul valley began when San Diego County approved residential subdivisions and commercial development. Since then, a wide-scale transformation of the northern portion of the Jamul valley has occurred on both sides of SR-94. The development of the various subdivisions identified in the cumulative setting would continue this urbanization trend. Future development under the County's General Plan would also contribute to this continuing transformation of the valley and surrounding area. San Diego County has estimated the Jamul/Dulzura Subregion buildout potential to be approximately 16,000 people, which is a 57% increase above the 10,159 estimated to be living there in 2009. The planned construction of the Procter Valley Road extension to Melody Road would open up a large area of undeveloped land southwest of the Reservation.

The County is attempting to temper those cumulative visual impacts by allowing for the transfer of densities thereby preserving large areas of open space that are situated in sensitive areas. The State also assists in the preservation of the visual character of the Jamul valley by preserving land within the wildlife refuge. The largest tract of this refuge immediately borders the Reservation and encompasses thousands of acres south of the Reservation. However, the continuing visual transformation of the valley would continue into the future. Based on the goals and policies of the County's Jamul/Dulzura Subregional Plan, which does not apply to the Reservation, the County seeks to minimize: (1) visual effects on recognized scenic vistas, (2) new sources of substantial light and glare, which would adversely affect day or nighttime view of listed historic buildings or recognized views in the area, and (3) damage to recognized scenic resources including trees, rock outcroppings and historic buildings within a state scenic highway.

Completion of Daisy Drive or alternative access road would include the realignment and widening of SR-94 and improvements to the intersection of SR-94 and Melody Road. The new roadway improvements would contribute to the visual transformation of the Jamul Valley that was begun by the County and is expected to continue with buildout under the Jamul/Dulzura Community Plan. The surrounding areas would remain open

as is the case with the CDFG Refuge/Preserve lands immediately adjacent to the Reservation.

Cumulative growth is not expected to significantly impact recognized scenic vistas, provide a new source of substantial light and glare (which would adversely affect day or nighttime views of listed historic buildings or recognized views in the area), or damage recognized scenic resources. When measured against the significance criteria and goals/policies stated in the County's Jamul/Dulzura Community Plan, future County development goes through a public review process that ensures growth consistency with stated County policies within this portion of the County. The No Action Alternative, which consists of Gaming Facility management by the JIV, would not significantly contribute to a cumulative visual resources impact.

## 5.3 ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ACTION

As stated in **Section 3.3**, the proposed GMA would allow SDGV to control the day-to-day operation of the JIV Gaming Facility. SDGV would, among other things, determine use of vendors; rates; pricing; charges to guests or patrons; concessioners, the issuance of credit; the granting of complementaries; the terms of admittance to the Gaming Facility for purposes of entertainment; staffing levels; organizational structure; and the type and character of publicity, marketing, advertising, entertainment and promotion. Full operational efficiency of the JIV Gaming Facility would result in patronage/traffic as described in the No Action Alternative baseline analysis. It is assumed for purposes of this analysis that the Gaming Facility would be used as planned and described in the Final TEE and in **Section 3.4** of the SEIS. That is, all parking demand would be met in the planned parking structure and surface parking lot, water demand met with potable water from the Otay Water District, wastewater treatment would be provided by the on-site wastewater treatment and wastewater disposal provided on-site and by trucking, etc. The GMA would not alter the external look and operation of the facility. Internally, promotional/advertising programs, entertainment acts, staffing, etc. would all be accommodated within the planned areas of the facility. No new temporary or permanent structures beyond those identified in the No Action Alternative baseline description in **Section 3.4** would result from approval of the Proposed Action. The GMA is merely an operational feature of the Tribal-approved Gaming Facility. The GMA would not result in activities that would impact the environment. Additionally, the operation of the Gaming Facility by SDGV would not contribute to a cumulative environmental impact.

The GMA does not grant SDGV the authority to construct gaming related facilities beyond those identified in the Final TEE/Addendums. The GMA is limited to the management of the Gaming Facility as described in **Section 3.3**.